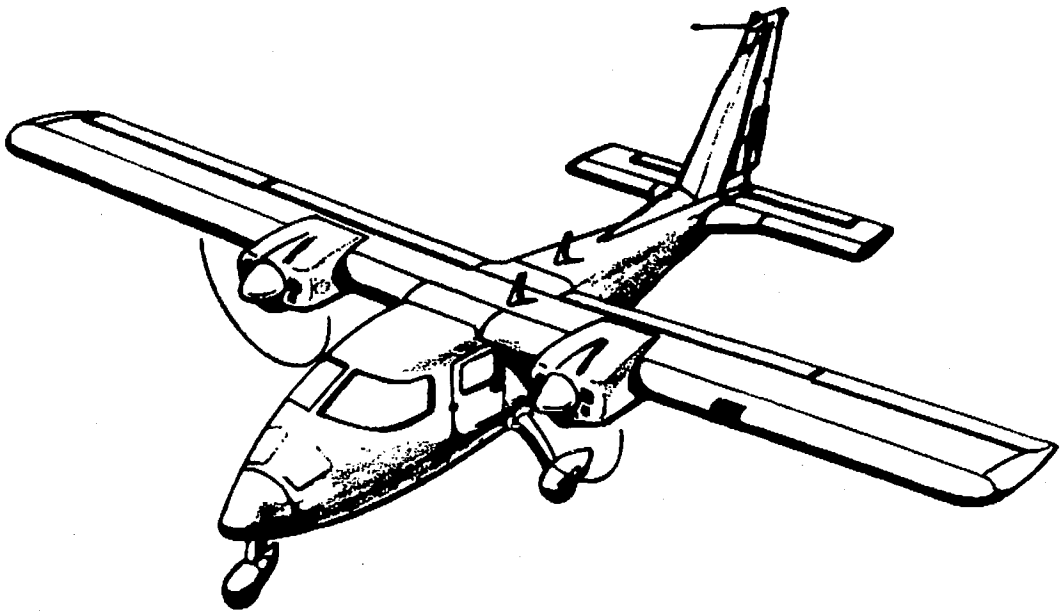
FLIGHT MANUAL



P68B VICTOR

R.A.I. Approved with letter No. 115.831/T dated 24th May 1974 for Sections I, II, III and for pages 4-1, 4-3, 4-5, 4-5bis of Section IV.

THIS DOCUMENT MUST BE CARRIED IN THE AIRPLANE AT ALL TIMES.

Serial Number 119

Registration Number VH - IYC

Compiled by _____

Date _____

NOR10.707-21

VALID FOR AIRCRAFT UPTO TO SERIAL NUMBER 152

Reprinted by Vulcanair S.P.A. on 19th March 2007

RAI APPROVED FLIGHT MANUAL

PARTENAVIA S.p.A.
Naples - Italy

PARTENAVIA MODEL P68B VICTOR

U.S. TYPE CERTIFICATION NUMBER A31EU

AIRCRAFT SERIAL NUMBER 119

AIRCRAFT IDENTIFICATION VH-IYC

THIS DOCUMENT MUST BE CARRIED IN THE AIRPLANE AT ALL TIMES.

OBSERVANCE OF THE OPERATING LIMITATIONS HEREIN, IS REQUIRED BY LAW

R.A.I. Approved with letter No. 115.831/T
Only for parts from I to III and pages 4-1,
4-3, 4-5, 4-5 bis of part IV.

Date 24th May 1974

PARTENAVIA P68B VICTOR
LOG OF REVISIONS

Revised Material Indicated by black vertical line in right hand margin

REVISION NO.	PAGE NO.	DATE	Ref. APPROVAL	
			DOCUMENT NO.	DATED
1	II; III; 1-2; 1-3; 2-1; 2-2; 2-3; 2-4; 3-1; 3-2; 4-1; 4-3; 4-5; 4-5 bis	10TH FEB. 1975	R.A.I. N° 121.205/T	20TH FEB. 1975
2	1-1; 1-2; 1-3; 3-1; 3-2	21ST MAY 1975	R.A.I. N° 123.639/T	28TH MAY 1975
3	1-2; 1-3; 2-3; 2-4; 3-1; 3-2; 4-1; 4-3	4TH JUN. 1975	R.A.I. N° 124.024/T	13TH JUN. 1975
4	1-3 1-4	3RD MAY 1976	R.A.I. N° 132.828/T	9TH JUL. 1976
5	1-1	19TH MAR. 1977	R.A.I. N° 138.510/T	19TH MAR. 1977
6	1-4; 3-3 4-5bis	19TH MAY 1977	R.A.I. N° 140.411/T	7TH JUN. 1977
7	1-1; 1-2; 1-3; 2-3; 3-1; 3-2	5TH DEC. 1977	R.A.I. N° 144.750/T	2ND JAN. 1978
8	1-1; 1-3	2ND MAY 1978	R.A.I. N° 147.439/T	2ND MAY 1978
9	II; III 1-3; 1-3a; 3-2; 3-2a	26TH MAR. 2007	Under Authority of DOA No. EASA.21J.009 with No. AS-AFM/07/008	4TH JUN. 2007

Note: Revision 4 is applicable for aircraft from S/N 65 onwards.

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SECTION I – OPERATING LIMITATIONS

ENGINES: Two Lycoming IO-360-A1B or
Two Lycoming IO-360-A1B6

ENGINE LIMITS: For all operations 2700 RPM, 200 HP

FUEL: 100/130 Minimum Grade Aviation Gasoline 103 U.S. Gallons (392 Litres)
Usable Capacity: 51.5 U.S. Gallons (196 Litres) each tank
Unusable Fuel 2.5 U.S. Gallons (9 Litres) each tank
Avoid Rapid Taxi Turns before Take-off or Excessive Nose-up Attitude with ¼ fuel or less in each tank

OIL: Total Oil Capacity: 8 Quarts per Engine
Usable Oil: 6 Quarts per Engine

PROPELLERS: Two Hartzell constant speed, full feathering, two blade propellers.
Model HC-C2YK-2C ( ) F/FC7666A-4, 72 inch diameter.
Blade angle range at 30 inch station.

Low	14.2 ÷ 0.2
Feather	81.2 ÷ 0.3

Avoid continuous operation between 2100 RPM to 2350 RPM (for IO-360-A1B only)

ENGINE INSTRUMENTS:

1. Engine Gauge Unit

a. Oil Temperature:	
Green Arc (Normal)	75 °F to 245 °F
Red Radial (Maximum)	245 °F
b. Oil Pressure:	
Red Radial (Minimum for Idle)	25 PSI
Green Arc	60 PSI to 90 PSI
Red Radial (Maximum)	90 PSI
c. Cylinder Head Temperature:	
Green Arc (Normal)	200 °F to 475 °F
Red Radial (Maximum)	475 °F

SECTION I – OPERATING LIMITATIONS

2. Tachometer

Green Arc (Normal)	550 RPM to 2700 RPM
Red Arc	2100 RPM to 2350 RPM (for IO-360-A1B only)
Red Radial (Maximum)	2700 RPM

3. Fuel Pressure (Fuel Flow Gauge)

Red Radial (Maximum)	12 PSI

4. Suction

Green Arc	4.5 to 5.2 in. Hg.

AIRSPEED LIMITATIONS: (*)

Never Exceed (Red Radial)	193 Kts. CAS
Caution Range (Yellow Arc)	153 Kts. CAS to 193 Kts. CAS
Normal Operating Range (Green Arc)	64 Kts. CAS to 153 Kts. CAS
Flap Operating Range (White Arc)	56 Kts. CAS to 99 Kts. CAS

Maximum Flap Extension Speed:

0° to 17°	152 Kts. CAS
17° to 30°	138 Kts. CAS
30° to 35°	99 Kts. CAS

Best Single Engine Rate of Climb (Blue Radial)	89 Kts. CAS
Manoeuvring Speed	125 Kts. CAS
Maximum Structural Cruising Speed	153 Kts. CAS
Minimum Single Engine Control Speed (Red Radial)	60 Kts. CAS
Maximum demonstrated crosswind velocity for Take-off and Landing	25 Kts.

(*) A.S.I. Colour Markings based on IAS

MANOEUVRES: This is a normal category airplane. Aerobatic manoeuvres iincluding spins prohibited.
Full deflection of the controls must not be accomplished above the Manoeuvring Speed (125 Kts. CAS)

FLIGHT LOAD FACTORS : At Maximum Gross Weight of 4321 pounds:

Manoeuvre:	Flaps 0°	Positive 3.8 g;	Negative 1.52 g
	Flaps 35°	Positive 2.0 g;	Negative 0.80 g

MAXIMUM TAKE-OFF WEIGHT: 4321 Pounds
MAXIMUM LANDING WEIGHT: 4100 Pounds

CENTRE OF GRAVITY LIMITS:
Aft Limit: 20.7 inches Aft of Datum (34% MAC) at all weights
Forward Limit: 12.8 inches Aft of Datum (21% MAC) at 4321 Pounds
10.2 inches Aft of Datum (16.8% MAC) at 3527 Pounds or less with straight line variation between these points. Datum location is at wing leading edge.

RAI Approval No.: 144.750/T dated 2nd January 1978
Revision 7

SECTION I – OPERATING LIMITATIONS FOR AIRCRAFT FROM SERIAL NUMBER 123 TO 152

PLACARDS:

1. On Emergency Window:
   "EMERGENCY EXIT" "1-PULL LOWER HANDLE 2- SLIDE UPPER LEVER RIGHT 3- PUSH WINDOW OUT"

2. On Fuel Selector Valves:

	RIGHT TANK	51.5 GALS. (196 LITRES)		LEFT TANK	51.5 GALS. (196 LITRES)
LEFT TANK 51.5 GALS.	LEFT ENGINE	ENG. SHUT OFF	ENG. SHUT OFF	RIGHT ENGINE	RIGHT TANK 51.5 GALS.

3. Between Fuel Selectors:

   "TAKE-OFF AND LAND WITH AUXILIARY FUEL PUMPS ON"

4. On Front Panel Left Side:

   a. "OPERATIONAL LIMITS

   This airplane must be operated as a NORMAL Category Airplane in compliance with the Operating limitations stated in the form of placards, markings and manuals.
   No Aerobatic Manoeuvres, including spins approved.
   Minimum Single Engine Control Speed 62 KIAS
   Manoeuvring Speed: 129 KIAS
   Demonstrated Crosswind Velocity for Take-off and Landing: 25 Knots
   One Engine Inoperative Stall: Maximum Altitude Loss: 600 feet.
   Maximum Pitch Angle: 30°. "

   b. "WARNING

   - Do Not Lower Flaps with Cargo Door Open
   - Expect Large Trim Change with Flap
   - Maximum Flap Extension Speed:
     0° - 17° : 157 KIAS
     17° - 30° : 143 KIAS
     30° - 35° : 101 KIAS "

   c. "PARKING BRAKE

   To apply brakes, depress rudder pedals and pull knob then release pedal pressure.
   To release brakes, push knob."

5. On Instrument Panel:

   a. "Stall Warning Inoperative with Battery and Alternators OFF"

   b. " VFR", "IFR", "DAY" or "NIGHT" (as applicable)

SECTION I – OPERATING LIMITATIONS FOR AIRCRAFT UP TO SERIAL NUMBER 122

PLACARDS:

1. On Emergency Window:

   "EMERGENCY EXIT" - "ROTATE HANDLE – PUSH WINDOW OPEN"

2. On Fuel Selector Valves:

   a. "TANK OFF"
   b. "ON 51.5 GASLS"
   c. "ENG. SHUT OFF"
   d. "CROSSFEED"
   e. "TANK OFF"
   f. "ON 51.5 GALS"
   g. "ENG. SHUT OFF"
   h. "CROSSFEED"

3. Between Fuel Selectors

   "CROSSFEED" – "RIGHT TANK TO LEFT ENGINE" – "RIGHT TANK TO BOTH ENGINES" – "LEFT TANK TO RIGHT ENGINE" – "LEFT TANK TO BOTH ENGINES"- "TAKE-OFF AND LAND WITH AUXILIARY FUEL PUMPS ON"

4. On Front Panel Left Side:

   a. "OPERATIONAL LIMITS

      This airplane must be operated as a NORMAL Category Airplane in compliance with the Operating limitations stated in the form of placards, markings and manuals.
      No Aerobatic Manoeuvres, including spins approved.
      Minimum Single Engine Control Speed 62 KIAS
      Manoeuvring Speed: 129 KIAS
      Demonstrated Crosswind Velocity for Take-off and Landing: 25 Knots
      One Engine Inoperative Stall: Maximum Altitude Loss: 600 feet.
      Maximum Pitch Angle: 30°. "

   b. "WARNING

      - Do Not Lower Flaps with Cargo Door Open
      - Expect Large Trim Change with Flap
      - Maximum Flap Extension Speed:

0°	-	17° :	157 KIAS
17°	-	30° :	143 KIAS
30°	-	35° :	101 KIAS "

   c. "PARKING BRAKE

      To apply brakes, depress rudder pedals, then pull knob and rotate clockwise. To release brakes, rotate knob counter-clockwise and release; then press and release rudder pedals.

5. On Instrument Panel:

   a. "The Stall Warning Inoperative when the Battery switch is in the OFF position"

   b. " VFR", "IFR", "DAY" or "NIGHT" (as applicable)

SECTION I – OPERATING LIMITATIONS

c. "Calibration Placard of the Magnetic Compass"

d. " WARNING – Avoid rapid taxi turns before Take-off or Excessive Nose-up Attitude with 1/4 fuel or less in each tank."

e. "WARNING - When flying in high humidity environment and at freezing temperature, open the engine alternate air doors."

f. "Flight into known icing conditions prohibited."

6. On Electric Panel:

a. "Before switching ON the BACK-UP REGULATOR switch OFF all electrical loads."
b. "When starting on external power, select OFF both alternators and battery."

7. On Aft Cabin Walls:

"Maximum baggage capacity 400 pounds – Maximum distributed load on cabin and cargo floor 200 lb/sq. ft.."

8. On Engine Control Pedestal:

a. "OPEN - THROTTLE - CLOSED"
b. "INCR. - PROPELLER - RPM - DECR. - FEATHER "
c. "RICH - MIXTURE - LEAN - IDLE-CUT-OFF"
d. "NOSE DOWN - NOSE UP" (Near Stabilator Trim Control)
e. "L-O-R" (Near Rudder Trim Control)
f. "L-NOSE-R" (Near Rudder Trim Control)

9. On the Door:

"Full Locked Position"

10. Near each Fuel Filler Cap:

"Fuel Tank Capacity 54 U.S. Gallons (205 Litres) – 100/130 Minimum Grade Aviation Gasoline"

11. Near the Oil Filler Cap:

" Oil – 8 Qts. Capacity"

"WARNING"

Severe icing may result from environmental conditions outside of those for which the aircraft is certificated.

Flight in freezing rain, freezing drizzle, or mixed icing conditions (super cooled liquid water and ice crystals) may result in:

- ice build-up on protected surfaces and exceed the capability of the ice protection system, or
- ice forming aft of the protected surfaces.

This ice may not be shed using the ice protection systems, and may seriously degrade the performance and controllability of the aircraft.

During flight, severe icing conditions that exceed those for which the aircraft is certificated shall be determined by the visual cues described below. If one or more of these visual cues exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions. The cues are:

- unusually extensive ice accumulation on the airframe and windscreen in areas not normally observed to collect ice, and/or
- accumulation of ice on the lower surface of the wing aft of the protected area, and/or
- accumulation of ice on the engine nacelles and propeller spinners farther aft than normally observed.

Since the auto-pilot, when installed and operating, may mask tactile cues that indicate adverse changes in handling characteristics, use of the auto-pilot is prohibited when any of the visual cues specified above exist, or when unusual lateral trim requirements or auto-pilot trim warnings are encountered while the aircraft is in icing conditions.

All wing icing inspection lights must be operative prior to flight into known or forecast icing conditions at night. **This direction supersedes any relief provided by any Minimum Equipment List.**

SECTION II – NORMAL PROCEDURES

A. PRE-FLIGHT CHECKS

a. External Inspection

a.1 Check for general serviceability and cleanliness of all external surfaces, intakes and aerials. Accumulations of frost and snow must be adequately removed.

a.2 Check security of access panels and fuel tank caps.

a.3 Inspect de-icer boots (if fitted) for damage.

a.4 Examine oleo gear for obvious pressure faults and inspect tyres for creeping and condition. Check the brake hoses for general serviceability and look for signs of fluid leakage in this area.

a.5 See that the wheels are correctly chocked and all external locks and covers are removed and stowed.

CAUTION

If fluid defrosting preparations are used to clear ice and snow from wing and tail surfaces, ensure that the solutions do not contaminate control surface ballraces as this can lead to seizure.

b. Internal Inspection

Check Security of Seats and Safety Belts.

SECTION II – NORMAL PROCEDURES

B. BEFORE STARTING ENGINES

1. Pre-flight Inspection - COMPLETE
2. Cabin Door Safety - LATCHED
3. Seats - ADJUSTED
4. Seat Belts - FASTENED
5. Parking Brake - SET
6. Circuit Breakers - ON
7. Radios - OFF
8. Alternate Air - OFF
9. Battery and Alternators - ON
10. Fuel Selectors - ON

C. STARTING ENGINES (ON AIRCRAFT BATTERY)

1. Mixture Controls - IDLE CUT-OFF
2. Throttle Controls - OPEN ½ INCH
3. Propeller Controls - FORWARD
4. Master Switch - ON
5. Engine to be Started

5.1 Ignition Switch - LEFT MAGNETO ON
5.2 Auxiliary Fuel Pumps - ON
5.3 Mixture Controls – Move to RICH position until a fuel flow is indicated and stabilised, then move to IDLE CUT-OFF
5.4 Propeller - CLEAR
5.5 Starter - ENGAGE
5.6 Mixture Control - Advance as Engine Starts
5.7 Ignition Switches - BOTH ON
5.8 Oil Pressure - Check to see that the oil pressure rises within thirty seconds, except in very cold weather when it may take somewhat longer. If the oil pressure does not show an indication, shut down the engine and have it checked.
5.9 Auxiliary Fuel Pumps - OFF. Check Fuel Pressure

6. Repeat steps 5.1 through 5.9 with the other Engine

NOTE: When starting on External Power leave Battery and Alternators OFF. After disconnecting the External Power, switch ON the battery first and then the Alternators.

D. ENGINE RUN-UP

1. Parking Brake – SET
2. Fuel Selectors – ON SAME SIDE TANK
3. Mixture Controls – FORWARD
4. Propeller Controls - FORWARD
5. Alternate Air - OFF
6. Both Engines at 1200 RPM
7. Left Engine

7.1 Throttle Control – FORWARD TO 1500 RPM

SECTION II – NORMAL PROCEDURES

7.2 Alternator Output - CHECK
7.3 Stand by Voltage Regulator - CHECK
7.4 Propeller Control – Check the feather position by bringing the propeller control fully back and then to the full forward position. Do not allow more than a 500 RPM drop during the feathering check
7.5 Mixture Control - CHECK
7.6 Throttle Control – FORWARD TO 2100 RPM
7.7 Alternate Air Control – ON then OFF again
7.8 Magnetos – CHECK
Normal drop – 100 RPM
Maximum drop – 175 RPM
Maximum Differential Drop – 50 RPM
7.9 Throttles – 1200 RPM
8. Repeat steps 7.1 through 7.9 with the Right Engine

E. BEFORE TAKE-OFF

1. Fuel Selectors – ON SAME SIDE TANK
2. Alternators – ON
3. Engine Gauges – IN THE GREEN
4. Vacuum Gauge – 4.5 to 5.2 In. Hg.
5. Altimeter – SET
6. Trim Tabs – SET
7. Clock – WOUND AND SET
8. Mixtures – FORWARD
9. Propellers – FORWARD
10. Quadrant Friction – ADJUSTED
11. Alternate Air – OFF
12. Wing Flaps – SET FOR TAKE-OFF
13. Seat Belts – FASTENED
14. Door – LOCKED
15. Controls – FREE, FULL TRAVEL
16. Auxiliary Fuel Pumps – ON
17. Pitot Heat – AS REQUIRED

F. TAKE-OFF AND CLIMB

1. Throttles – FORWARD
2. Raise Nose Wheel at 62 Kts. IAS (Minimum Control Speed)
3. Accelerate to 90 Kts. IAS (Best Rate of Climb Speed)
4. Retract Flaps at Safe Altitude
5. Maximum Climb Power: 2700 RPM – FULL THROTTLE
6. Auxiliary Fuel Pumps – OFF

SECTION II – NORMAL PROCEDURES

G. CRUISE

1. Throttles – SET
2. Engine RPM – SET
3. Mixtures – SET
4. Entering I.M.C.: Watch for possible need of Alternate Air.

H. BEFORE LANDING

1. Auxiliary Fuel Pumps – ON
2. Mixtures – FULL RICH
3. Propellers - FORWARD
4. Alternate Air – OFF
5. Flaps – DOWN 15° below 157 Knots IAS
6. Flaps – DOWN 35° below 101 Knots IAS
7. Minimum Control Speed - 62 Knots IAS

I. AFTER LANDING

1. Auxiliary Fuel Pumps – OFF (During Landing Run)
2. Wing Flaps – UP
3. Unnecessary Radios - OFF

J. SECURING AIRCRAFT

1. Parking Brake - SET
2. Radios - OFF
3. Throttles - IDLE
4. Propellers – FORWARD
5. Mixtures – IDLE CUT-OFF
6. Breaker Switches - OFF
7. Magneto Switches – OFF
8. Battery and Alternators - OFF

THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCIVE TO SEVERE IN-FLIGHT ICING:

- Visible rain at temperatures below 0 degrees Celcius ambient air temperature;
- Droplets that splash or splatter on impact at temperatures below 0 degrees Celcius ambient air temperature.

PROCEDURES FOR EXITING A SEVERE ICING ENVIRONMENT: *(These procedures are applicable to all flight phases from take-off to landing.)*

Monitor the ambient air temperature.

While severe icing may form at temperatures as cold as -18 degrees Celcius, increased vigilance is warranted at temperatures around freezing when visible moisture is present.

If the visual cues which are specified in the Limitations Section of the AFM for indentifying severe icing conditions are observed, accomplish the following:

- Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the aircraft has been certificated.
- Avoid abrupt and excessive manoeuvring that may exacerbate control difficulties.
- Do not engage the autopilot.
- If the autopilot had previously been engaged, hold the control wheel firmly and disengage the autopilot.
- If an unusual roll response or un-commanded roll control movement is observed, reduce the angle-of-attack.
- Do not extend flaps when holding in icing conditions. Operation with flaps extended can result in a reduced wing angle-of-attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area.
- If the flaps are extended, do not retract them until the airframe is clear of ice.
- Report these weather conditions to Air Traffic Control.

SECTION III – EMERGENCY PROCEDURES – EMERGENCY CHECK LIST

1. ENGINE INOPERATIVE PROCEDURE

A. ENGINE FAILURE DURING TAKE-OFF – SPEED BELOW 62 KNOTS IAS

1. Throttles – CLOSE IMMEDIATELY
2. Brakes – AS REQUIRED

B. ENGINE FAILURE DURING TAKE-OFF – SPEED ABOVE 62 KNOTS IAS RUNWAY STILL AVAILABLE FOR LANDING

1. Cut Power
2. Maintaining Direction, Land Directly

C. ENGINE FAILURE DURING TAKE-OFF – SPEED ABOVE 62 KNOTS IAS AND NO RUNWAY AVAILABLE FOR LANDING

1. Maintain enough speed margin above V_{MC} = 62 Knots IAS and maintain heading with co-ordinated use of Rudder and Ailerons
2. Both Engines: THROTTLES FULL FORWARD
3. Flaps Retracted (If extended)
4. Trim Tabs: ADJUST
5. Inoperative Engine:

5.1 Throttle – CLOSE
5.2 Propeller – FEATHER
5.3 Mixture – IDLE CUT-OFF
5.4 Auxiliary Fuel Pump – OFF
5.5 Magnetos – OFF
5.6 Fuel Selector – ENG. SHUT OFF
5.7 Alternator - OFF

6. Climb at Best Single Engine Climb Speed 88 Knots IAS
7. Land as soon as practicable

D. PROCEDURE FOR BEST PERFORMANCE AFTER ENGINE FAILURE DURING CRUISE FLIGHT

1. Inoperative Engine – SECURE
2. Operative Engine – ADJUST
3. Trim Tab - ADJUST
4. Fuel Valve Positions: Inoperative Engine – ENG. SHUT OFF
   Operative Engine – ON SAME SIDE TANK. Also see Cross-feed Procedure
5. Electrical Load – DECREASE TO MINIMUM REQUIRED
6. As soon as practicable – LAND

E. ENGINE INOPERATIVE LANDING

1. Operative Engine:

1.1 Fuel Selector – ON SAME SIDE TANK
1.2 Mixture – FULL RICH
1.3 Propeller - FORWARD

SECTION III – EMERGENCY PROCEDURES – EMERGENCY CHECK LIST FOR AIRCRAFT FROM SERIAL NUMBER 123 TO 152

1.4 Auxiliary Fuel Pumps - ON
2. Approach at – 88 Knots IAS
3. Wing Flaps – DOWN when landing is assured

F. ENGINE INOPERATIVE GO AROUND

1. Throttle – FULL FORWARD
2. Flaps - UP (If extended)
3. Climb at Best Single Engine Climb Speed – 88 Knots IAS

G. ENGINE RESTART IN FLIGHT

1. Fuel Selectors – ON
2. Magneto Switches - ON
3. Throttle – FORWARD APPROXIMATELY ONE INCH
4. Propeller – OUT OF FEATHER POSITION
5. Starter . PRESS AND HOLD UNTIL ENGINE IS WINDMILLING
6. Mixture – FULL RICH
7. Alternator - ON

H. FUEL CROSSFEED PROCEDURE

1.	Right Tank to Left Engine (Right Engine Shut Off):	LH Fuel Selector - RIGHT TANK RH Fuel Selector - ENG. SHUT OFF
2.	Right Tank to Both Engines:	RH Fuel Selector - RIGHT TANK LH Fuel Selector - RIGHT TANK
3.	Left Tank to Right Engine: (Left Engine Shut Off):	RH Fuel Selector - LEFT TANK LH Fuel Selector - ENG. SHUT OFF
4.	Left Tank to Both Engines:	RH Fuel Selector - LEFT TANK LH Fuel Selector - LEFT TANK

I. FUEL SYSTEM INDEPENDENCE

To obtain complete independence between the Right Side Fuel System and the Left Side Fuel System, position each Fuel Selector ON.

II. FLIGHT INSTRUMENTS – EMERGENCY PROCEDURE

A. VACUUM SYSTEM (Attitude and Directional Gyros)

1. Red Indicator on Gauge will show Failure
2. Automatic Valve will select Operative Source

B. STATIC ALTERNATE AIR DOOR ACTUATION

In the event office, foreign matter or other causes obstructing the external static doors, actuate the Alternate Air Control located on the left hand side of the Engine Pedestal.
The correction on the Altimeter and the Air Speed Indicator is contained in – 30 ft. and – 4 Kts.

SECTION III – EMERGENCY PROCEDURES – EMERGENCY CHECK LIST FOR AIRCRAFT UP TO SERIAL NUMBER 122

1.4 Auxiliary Fuel Pumps - ON
2. Approach at – 88 Knots IAS
3. Wing Flaps – DOWN when landing is assured

F. ENGINE INOPERATIVE GO AROUND

1. Throttle – FULL FORWARD
2. Flaps - UP (If extended)
3. Climb at Best Single Engine Climb Speed – 88 Knots IAS

G. ENGINE RESTART IN FLIGHT

1. Fuel Selectors – ON
2. Magneto Switches – ON
3. Throttle – FORWARD APPROXIMATELY ONE INCH
4. Propeller – OUT OF FEATHER POSITION
5. Starter . PRESS AND HOLD UNTIL ENGINE IS WINDMILLING
6. Mixture – FULL RICH
7. Alternator – ON

H. FUEL CROSSFEED PROCEDURE

1. Right Tank to Left Engine (Right Engine Shut Off):	LH Fuel Selector	- TANK OFF
	RH Fuel Selector	- ENG. SHUT OFF
2. Right Tank to Both Engines:	RH Fuel Selector	- CROSSFEED
	LH Fuel Selector	- TANK OFF
3. Left Tank to Right Engine: (Left Engine Shut Off):	RH Fuel Selector	- TANK OFF
	LH Fuel Selector	- ENG. SHUT OFF
4. Left Tank to Both Engines:	RH Fuel Selector	- TANK OFF
	LH Fuel Selector	- CROSSFEED

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III. ELECTRICAL SYSTEM – EMERGENCY PROCEDURES:

1. ALTERNATORS

A. ONE ALTERNATOR EMERGENCY LIGHT COMES ON :

1. Check the Alternator Output
2. If the Alternator's Output is Normal, disregard the light
3. If Output is Zero, Insufficient or Fluctuating, Switch Off the Alternator

B. BOTH ALTERNATOR EMERGENCY LIGHTS COME ON:

1. Reduce Electric Load to a Minimum
2. Switch to Stand-by Regulator
3. If Emergency Lights go off, reconnect electric loads
4. If lights do not go off, switch both Alternators off and prepare to terminate the flight

WARNING

In case of an abnormally high load, it could occur that when switching back on the electrical loads, the failure lights may come on again. In this case leave the abnormal load OFF and repeat the manoeuvre from steps B1 to B3

IV. SPINS

All spins are prohibited. However, in the event an unintentional spin is encountered, recovery can be accomplished by immediately using the following procedures:

a. Retard both throttles to the idle position

b. Apply full rudder in the opposite direction of the spin.

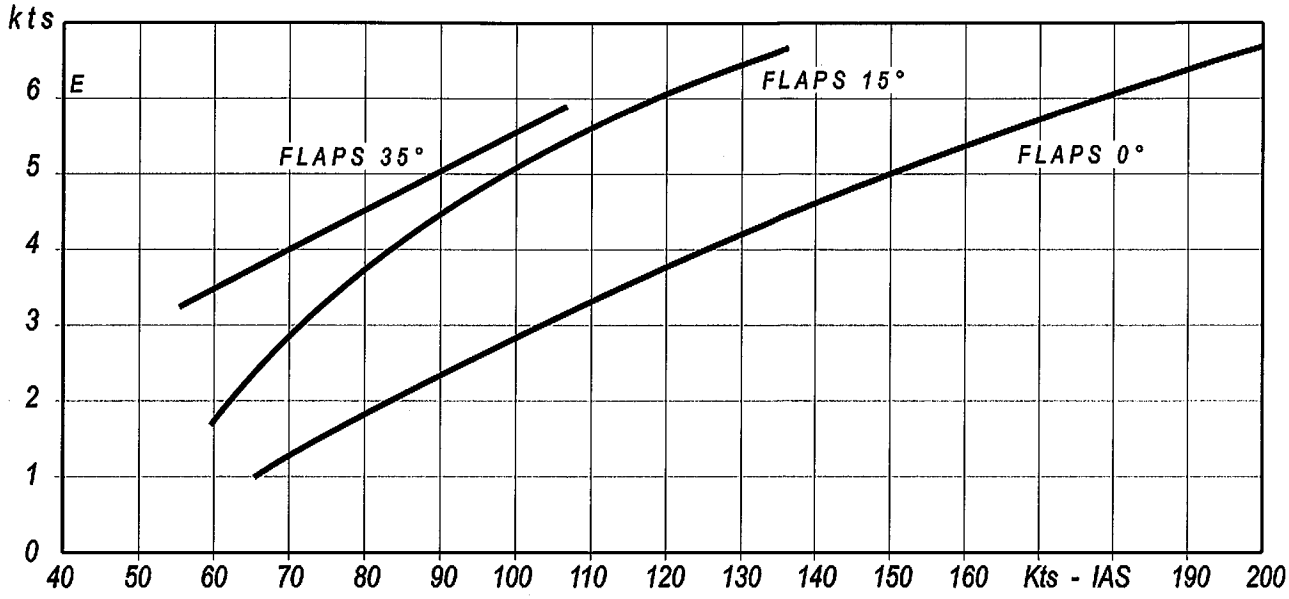
c. Push control wheel forward.

d. Maintain controls in these positions until the spin stops, then neutralise rudder.

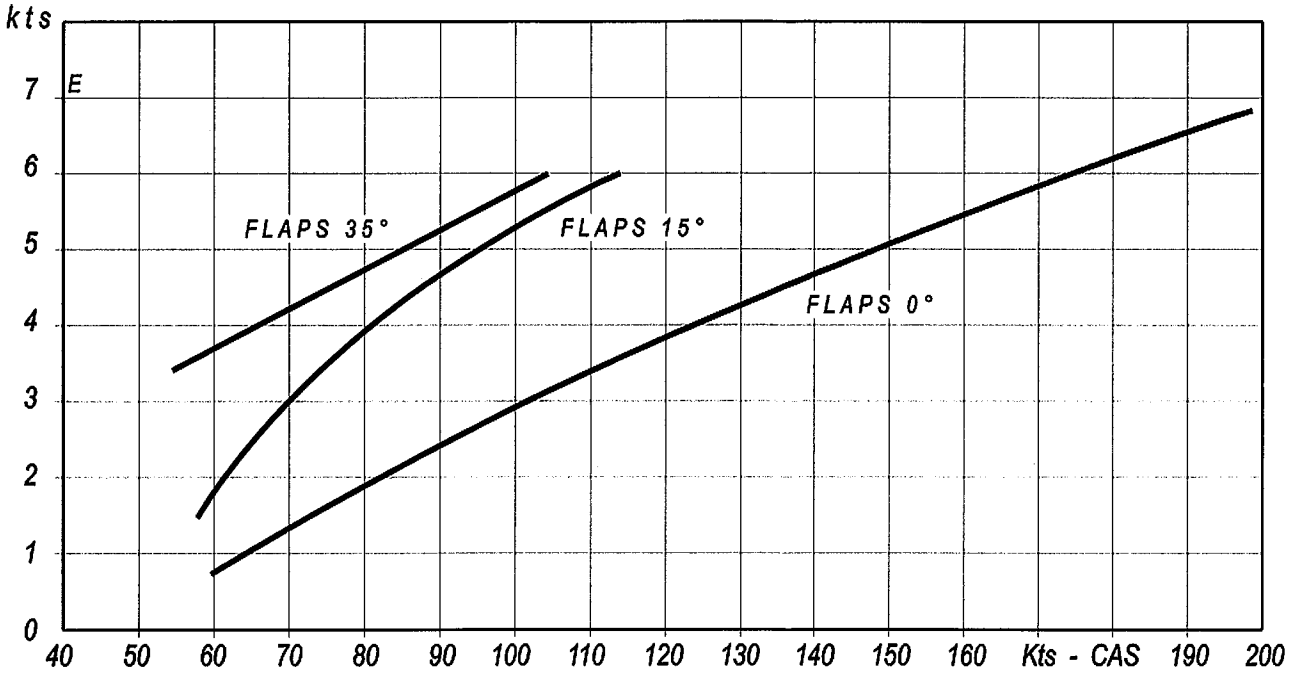
e. Recover from dive with smooth back pressure on the control wheel. No abrupt control movement should be used during recovery from the dive, as the manoeuvring speed and positive limit factor may be exceeded.

SECTION IV – PERFORMANCE

TO OBTAIN CAS FROM IAS SUBTRACT "E" FROM IAS
CAS = IAS – "E"

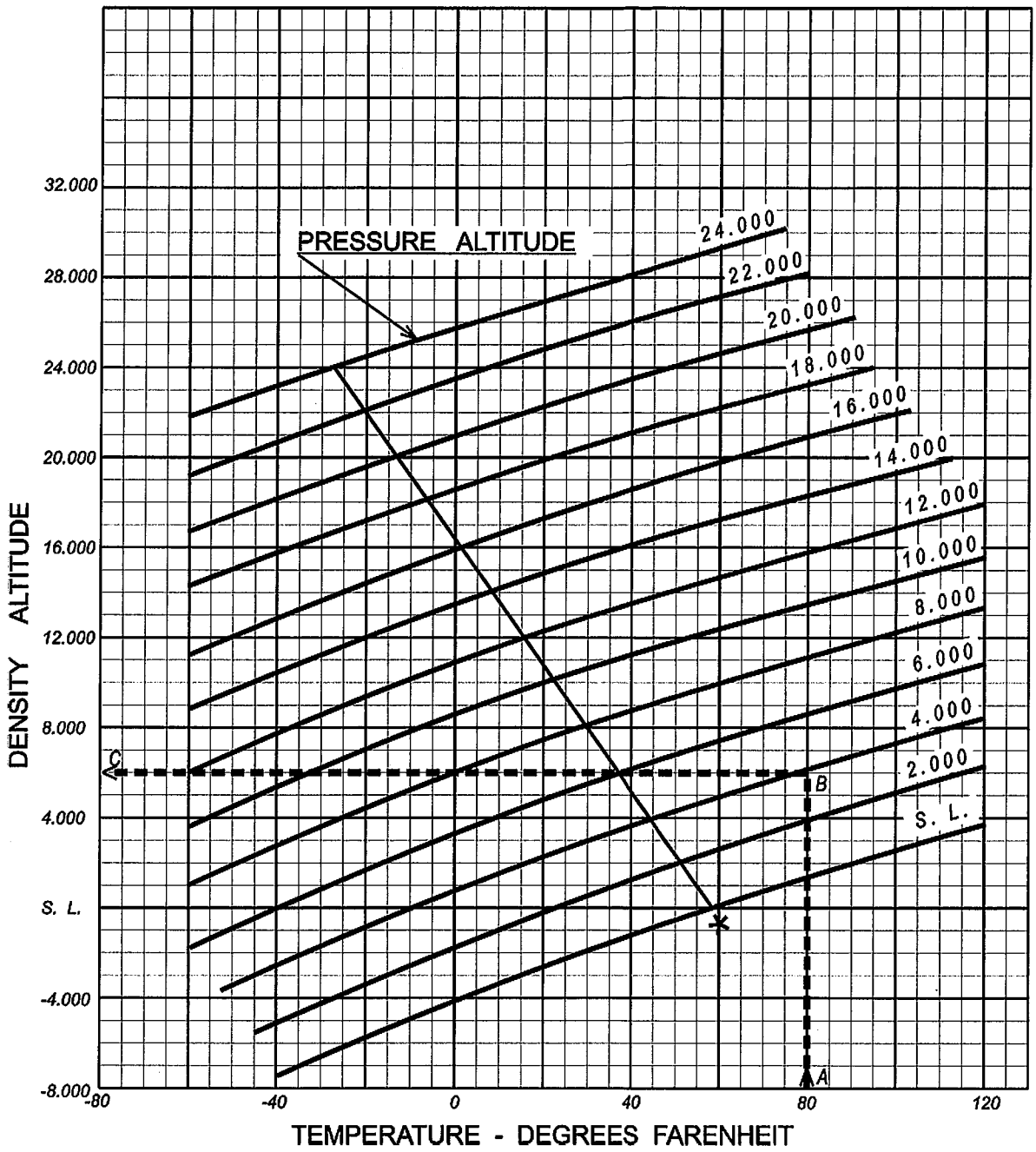


TO OBTAIN IAS FROM CAS ADD "E" TO CAS
IAS = CAS + "E"



SECTION IV – PERFORMANCE

DENSITY AND PRESSURE ALTITUDE CONVERSION



EXAMPLE

a. Temperature - 80 °F
b. Pressure Altitude - 4000 ft.
c. Density Altitude

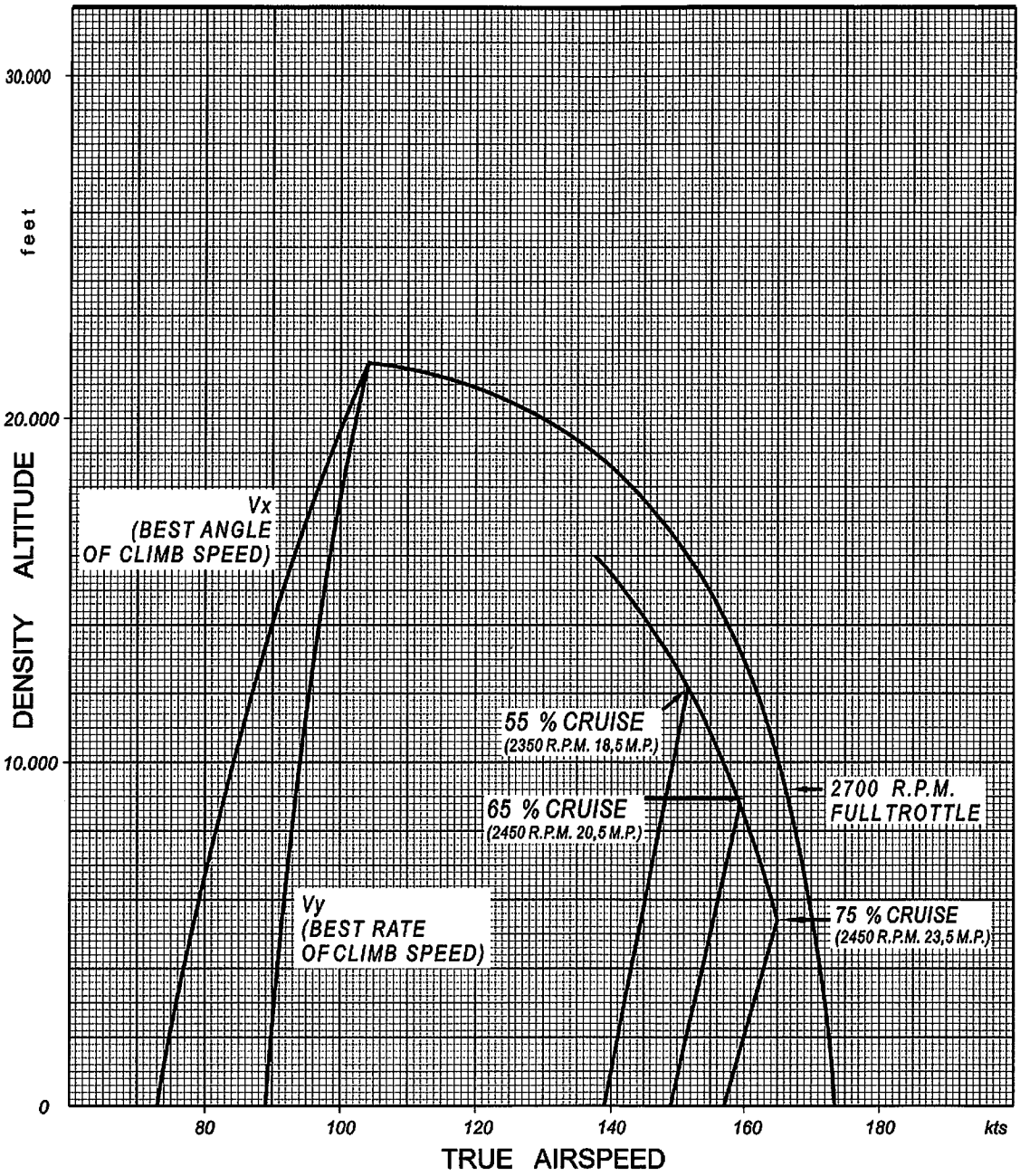
* Standard Temperature

STALL SPEED – POWER OFF
MAXIMUM TAKE-OFF WEIGHT: 4321 POUNDS

CONFIGURATION	ANGLE OF BANK	STALL SPEED KNOTS IAS
FLAPS 0° CRUISE	0°	65
	30°	70
	60°	93
FLAPS 15° TAKE-OFF	0°	62
	30°	67
	60°	89
FLAPS 35° LANDING	0°	60
	30°	64
	60°	84

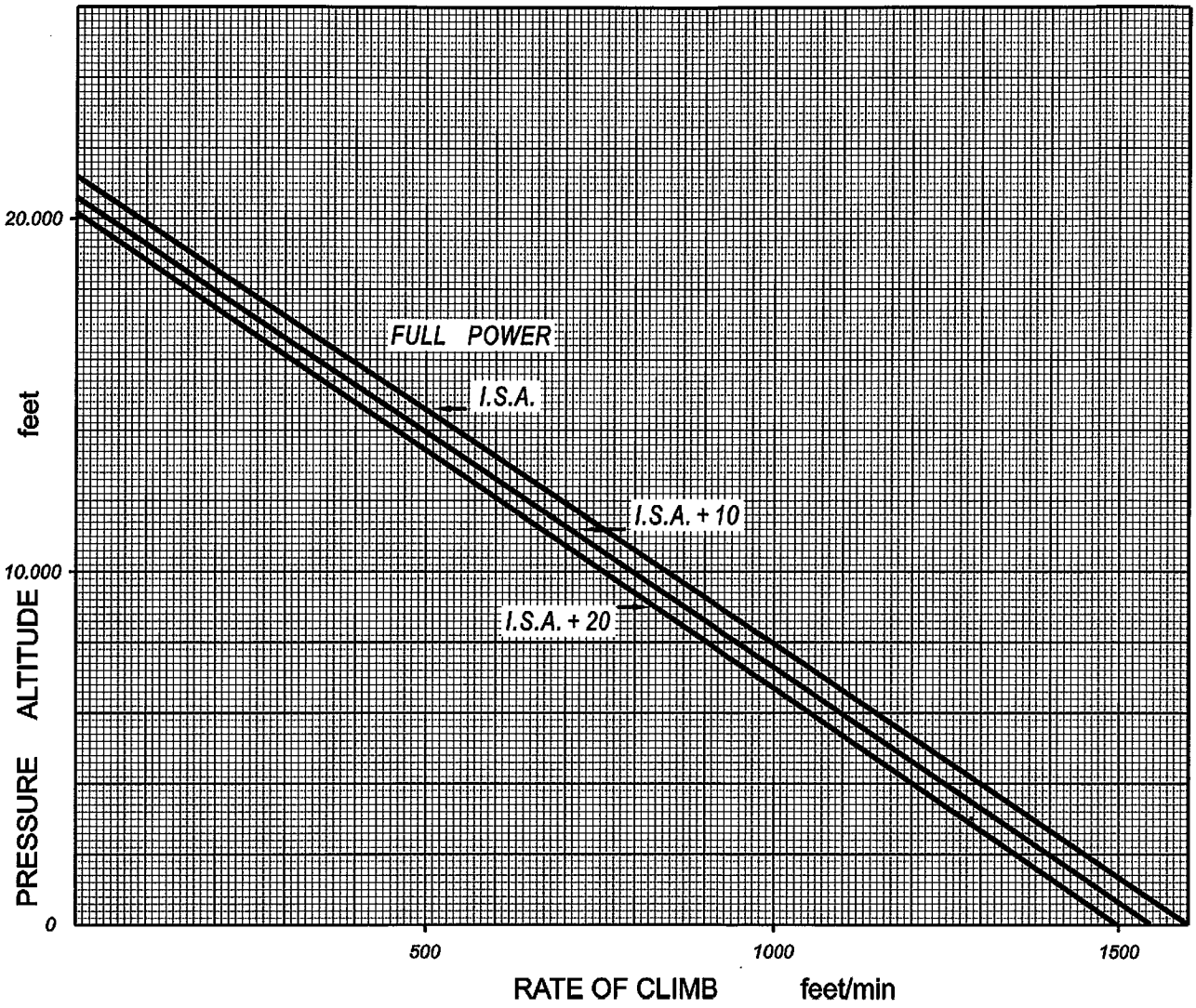
SECTION IV – PERFORMANCE

TRUE AIRSPEED Vs. DENSITY ALTITUDE
(MAXIMUM WEIGHT WITH WHEEL FAIRINGS)



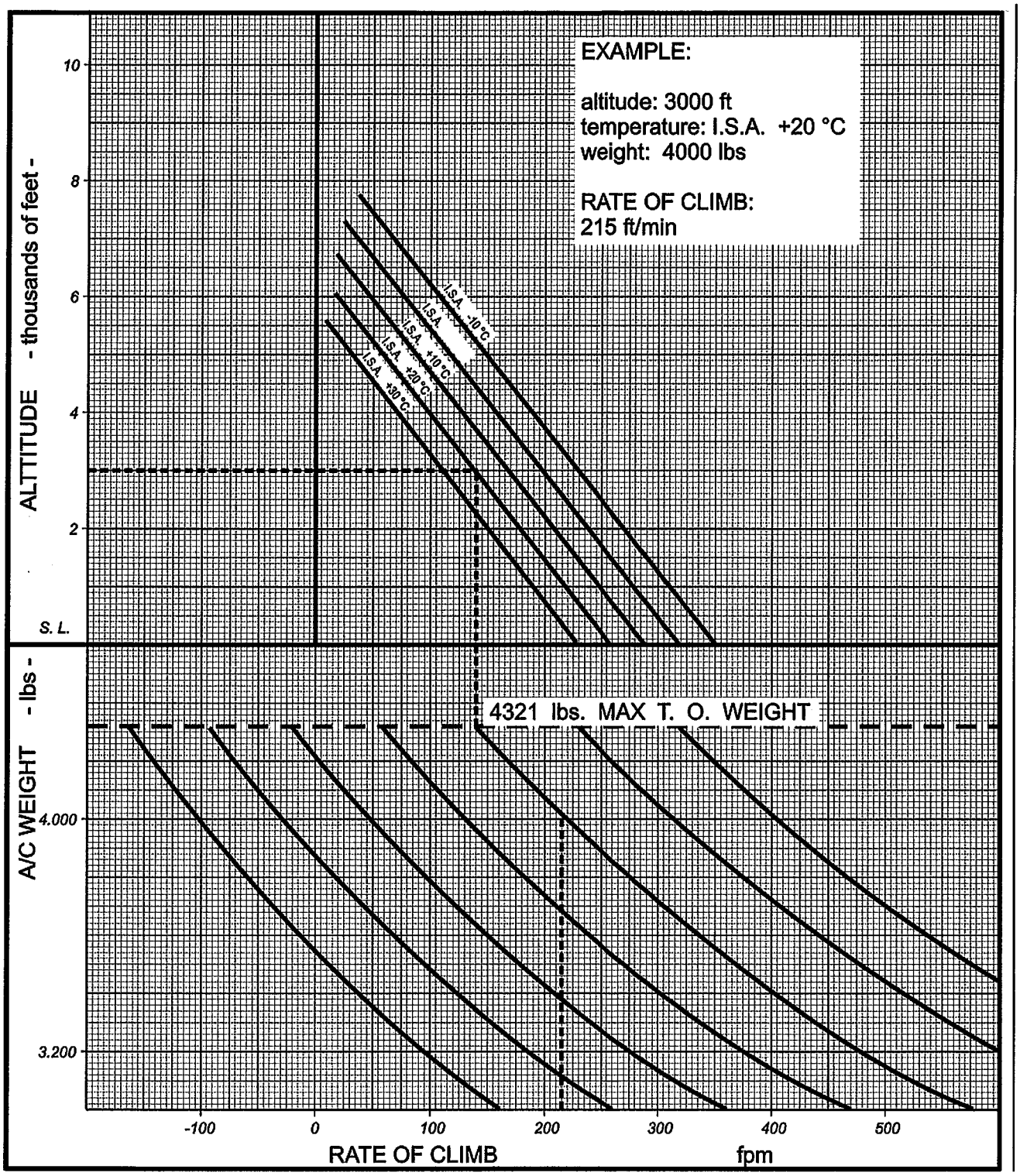
SECTION IV – PERFORMANCE

MAXIMUM WEIGHT RATE OF CLIMB
(BEST RATE OF CLIMB SPEED – 90 KIAS)



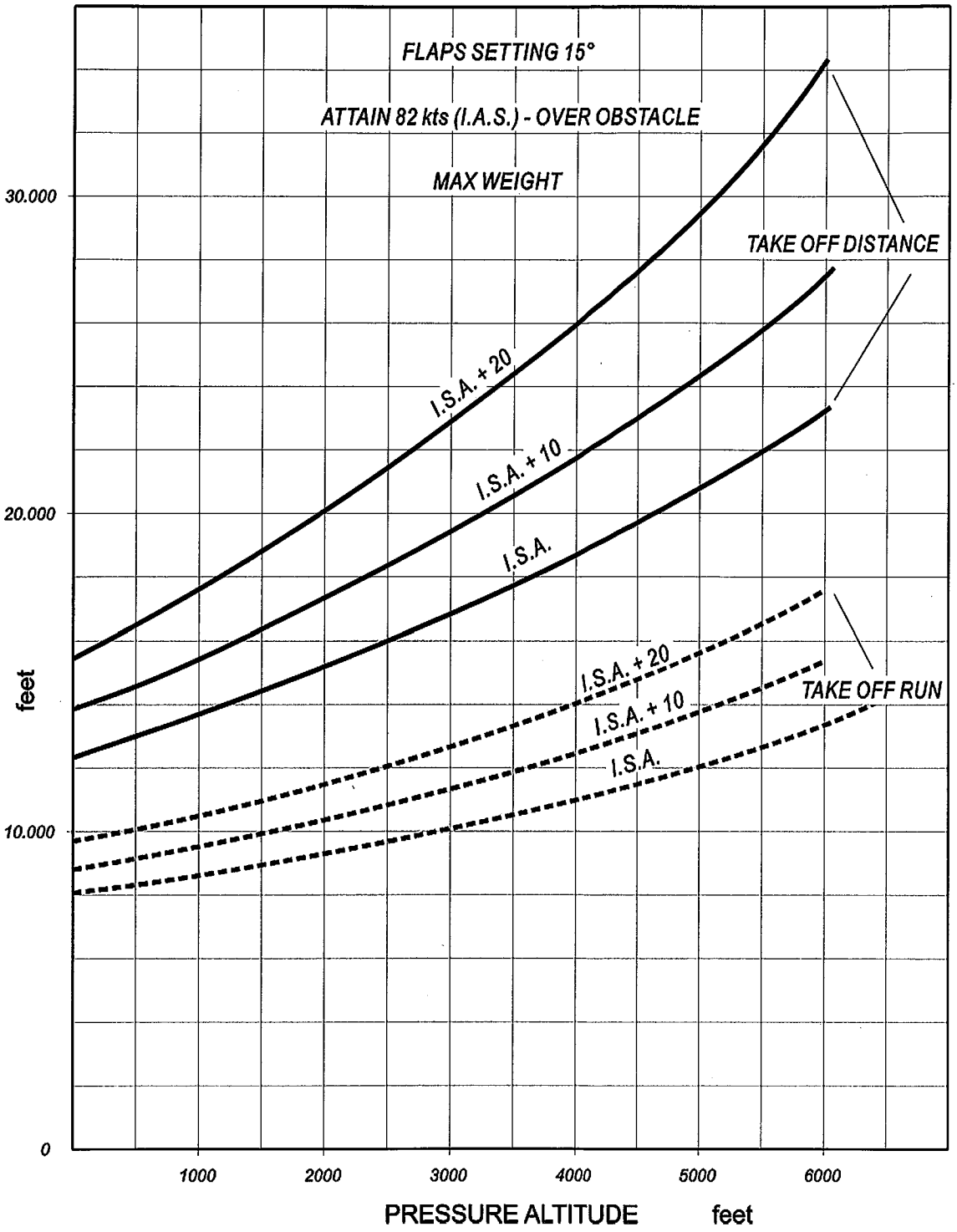
SECTION IV – PERFORMANCE

RATE OF CLIMB – CRITICAL (LEFT) ENGINE INOPERATIVE
(BEST RATE OF CLIMB SPEED – 88 KIAS)



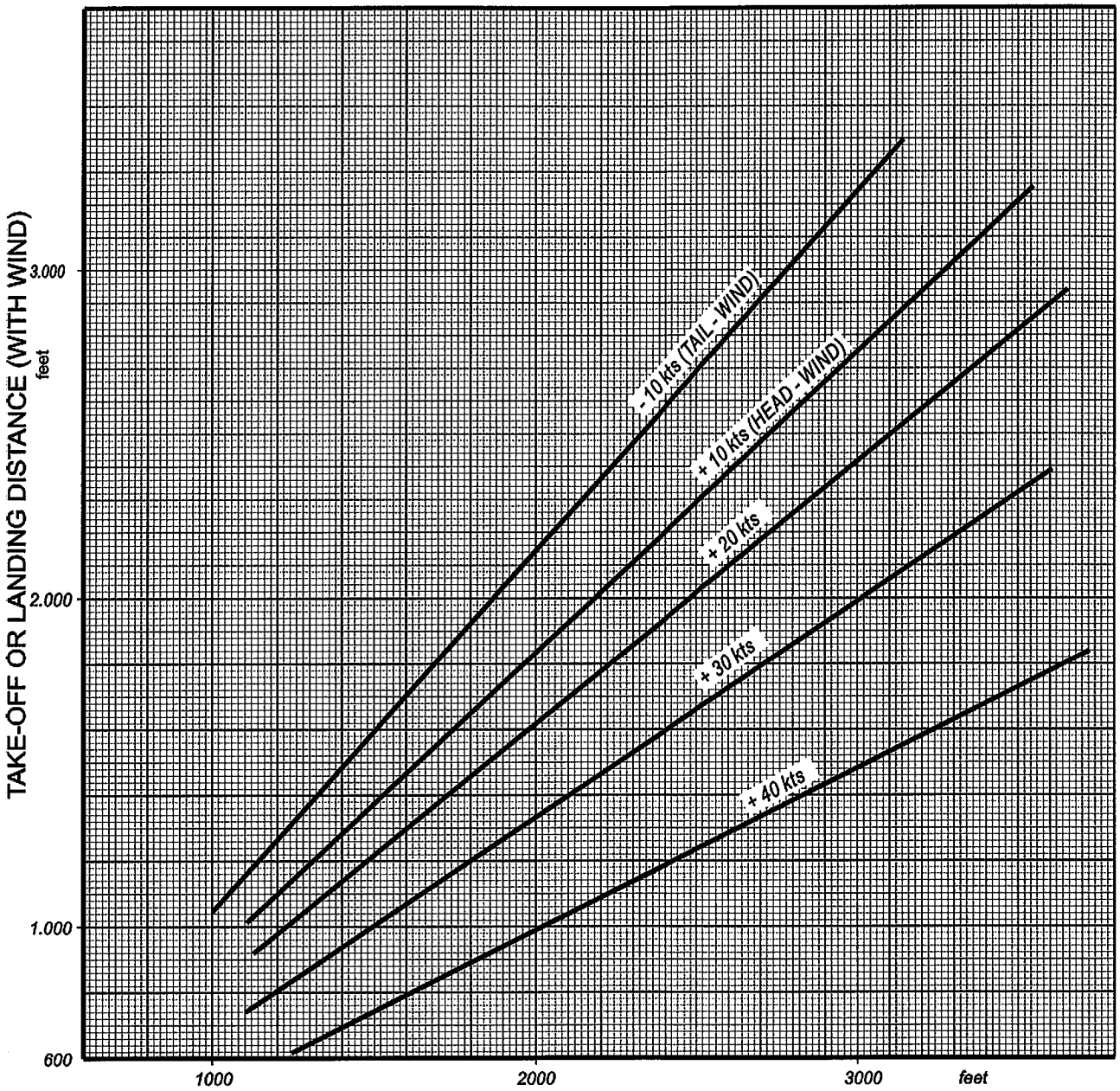
SECTION IV – PERFORMANCE

TAKE-OFF RUN AND TAKE-OFF DISTANCE OVER 50 FOOT OBSTACLE
VERSUS PRESSURE ALTITUDE



SECTION IV – PERFORMANCE

TAKE-OFF AND LANDING DISTANCE WIND CORRECTION

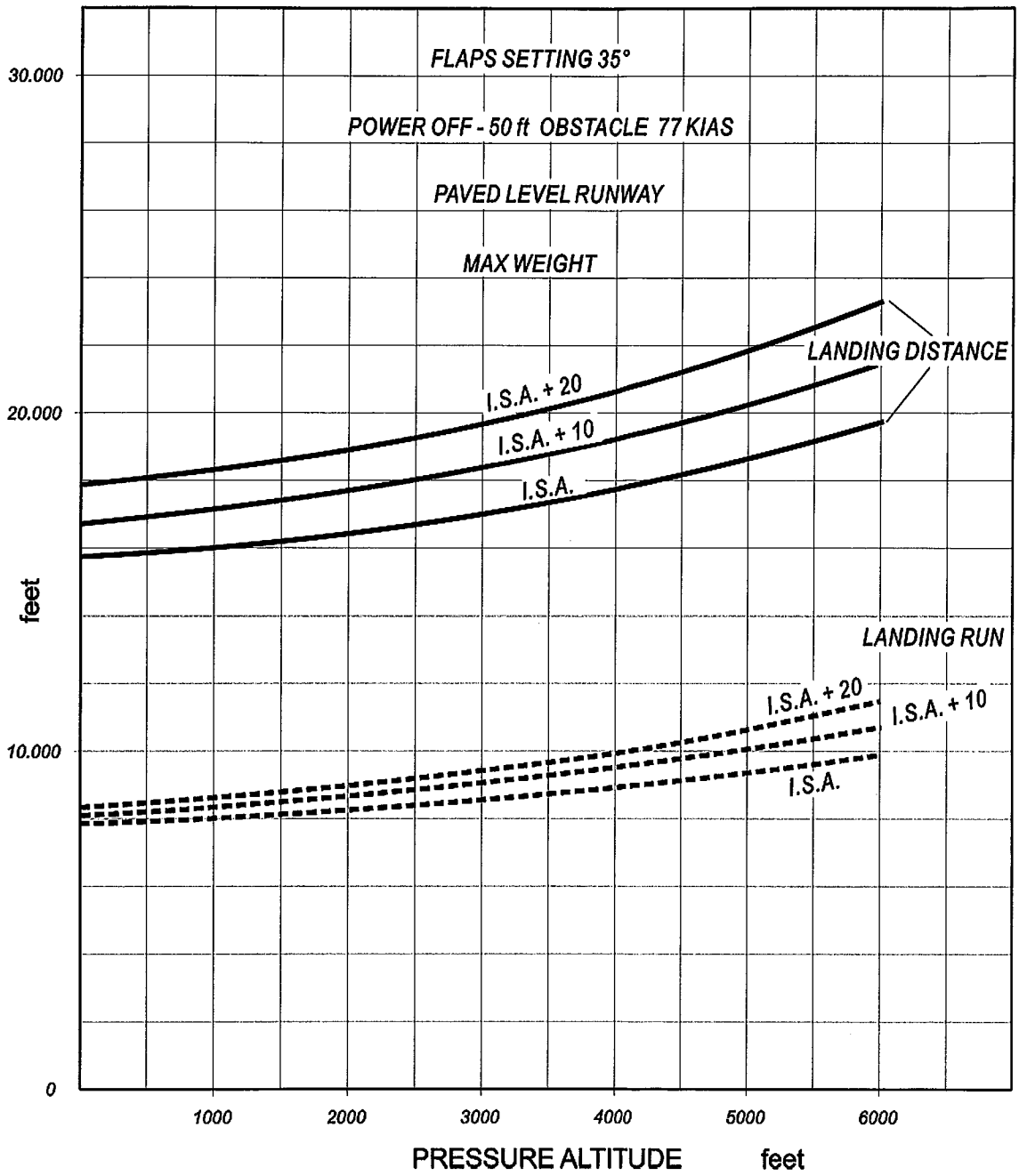


TAKE-OFF OR LANDING DISTANCE
(SEE GRAPH ON PAGE 4-6 AND 4-7)

INCREASE TAKE-OFF RUN BY 10 TO 25 PERCENT FOR OPERATION ON A GRASS RUNWAY (ROLL CO-EFFICIENT APPROXIMATELY 0.06 TO 0.1). USUAL VALUE 15 PERCENT

SECTION IV – PERFORMANCE

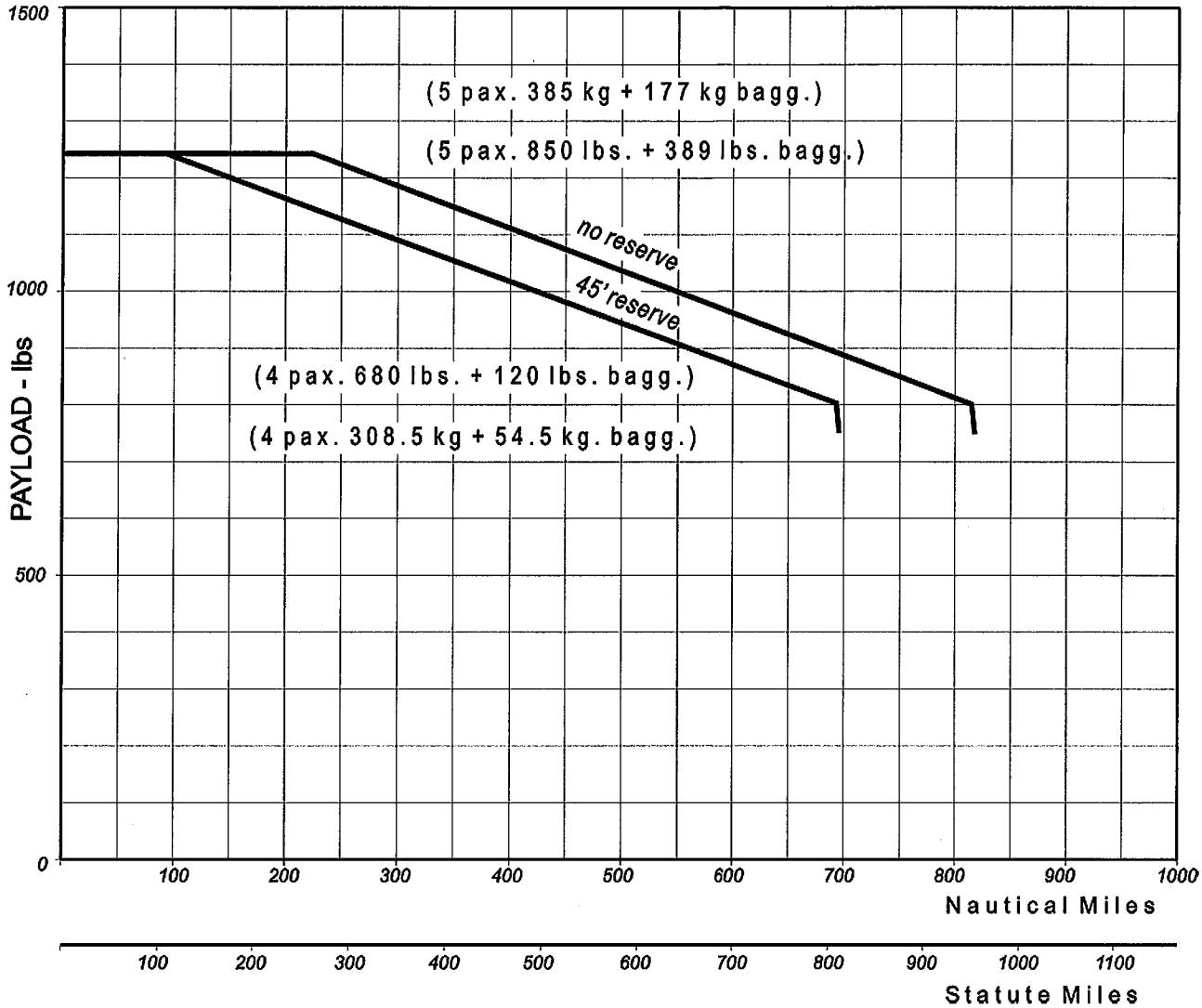
LANDING RUN AND LANDING DISTANCE OVER 50 FOOT OBSTACLE
VERSUS PRESSURE ALTITUDE



LANDING DISTANCE SHOULD BE INCREASED UP TO 13 PERCENT WHEN OPERATING FROM A SHORT, DRY, GRASS SURFACE

SECTION IV – PERFORMANCE

PAYLOAD VERSUS RANGE
75% RATED POWER

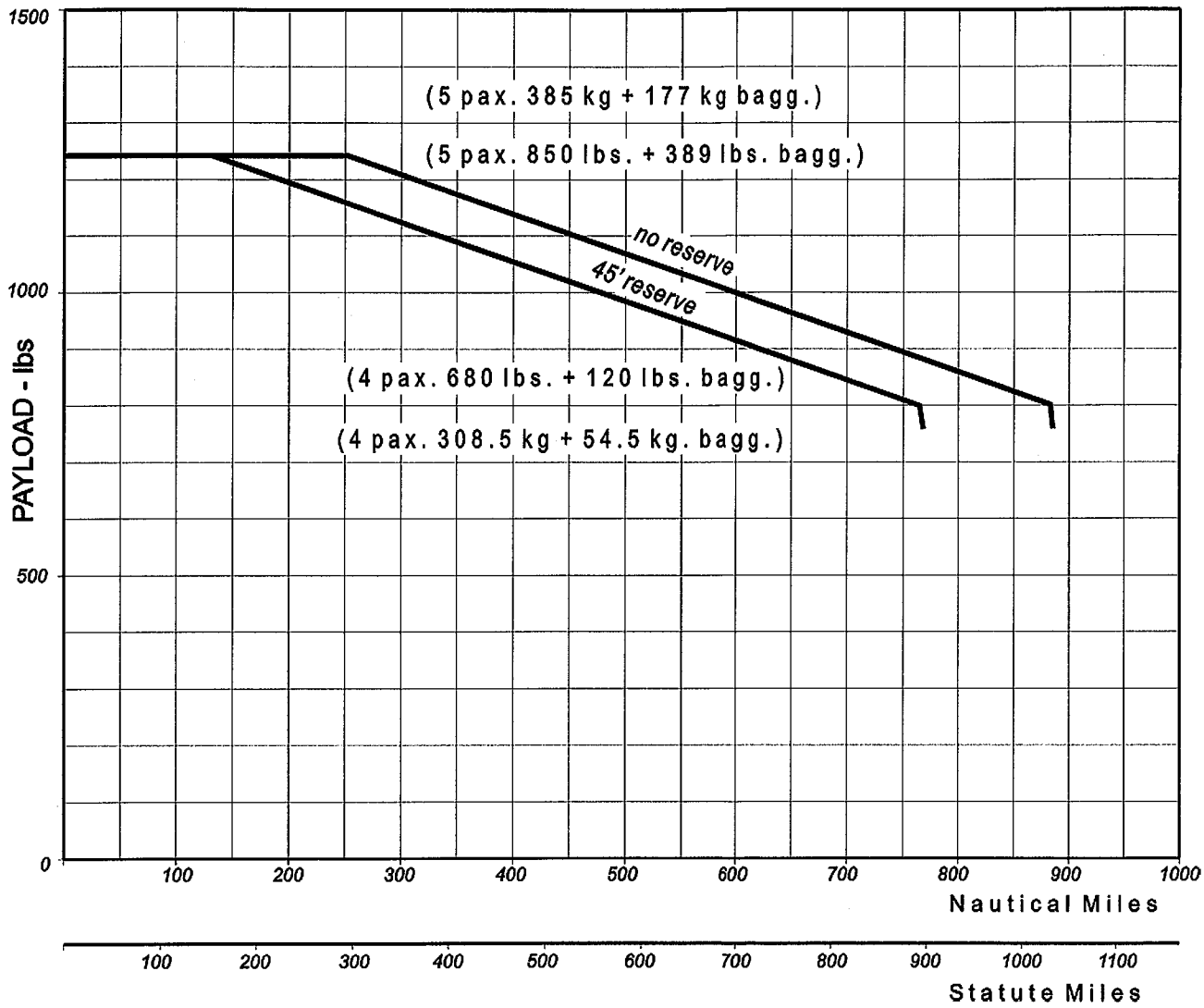


CONDITIONS :

ISA, Zero Wind
TAS 166 Knots
Altitude: 5500 Feet
Fuel Consumption: 20.6 U.S. Gallons per Hour
Maximum Take-off Weight: 4321 Pounds
Basic Operating Weight: 2909 Pounds (Including 29 pounds unusable fuel, 170 pound Pilot, IFR Instrumentation, Avionics and Oil, excluding De-icing Equipment).
Fuel Consumption Allowance: (Take-off, Climb, Descent, Landing) : 3.5 U.S. Gallons

SECTION IV – PERFORMANCE

PAYLOAD VERSUS RANGE
65% RATED POWER

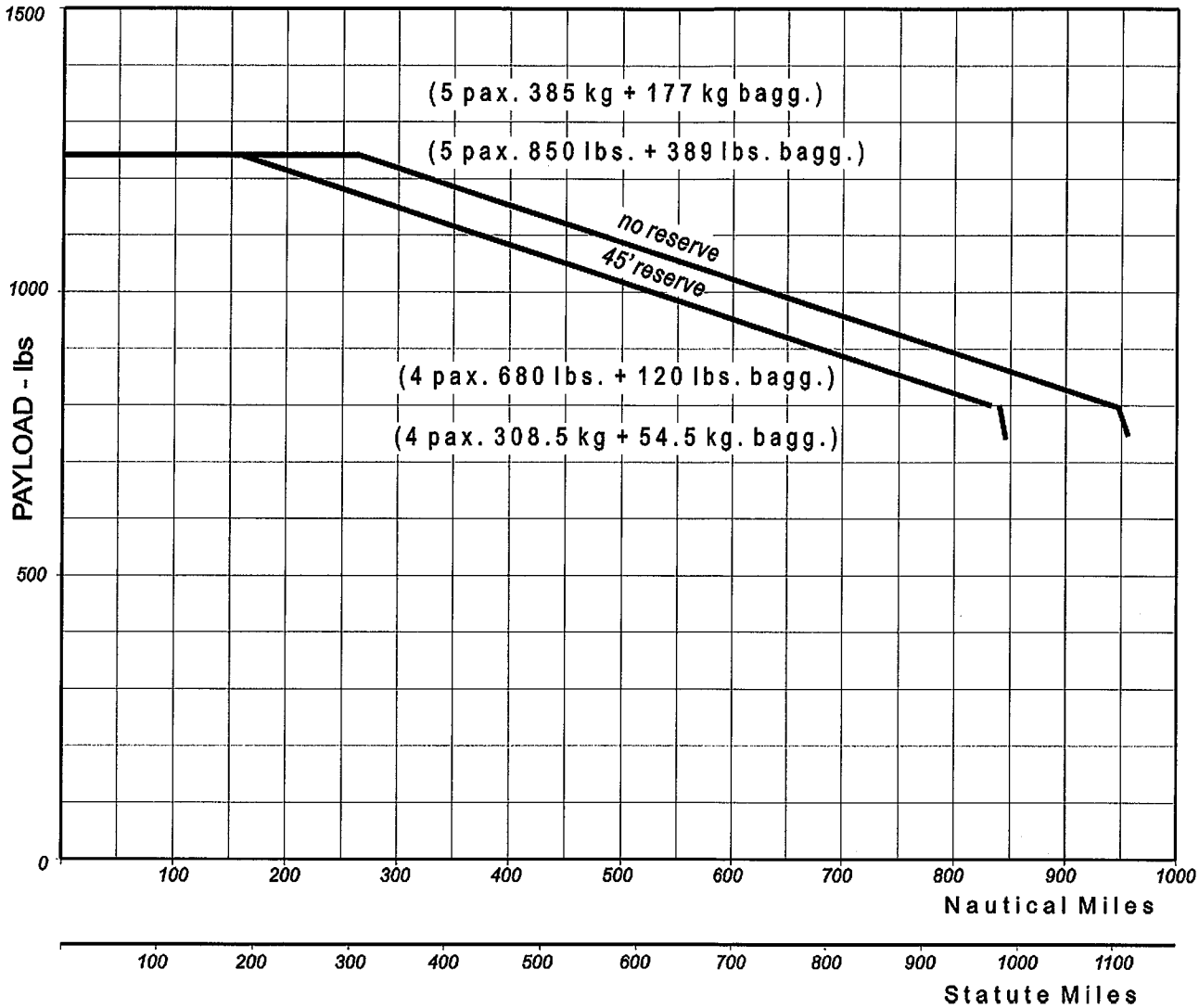


CONDITIONS :

ISA, Zero Wind
TAS 159 Knots
Altitude: 9000 Feet
Fuel Consumption: 18.3 U.S. Gallons per Hour
Maximum Take-off Weight: 4321 Pounds
Basic Operating Weight: 2909 Pounds (Including 29 pounds unusable fuel, 170 pounds Pilot, IFR Instrumentation, Avionics and Oil, excluding De-icing Equipment).
Fuel Consumption Allowance: (Take-off, Climb, Descent, Landing) : 5.5 U.S. Gallons

SECTION IV – PERFORMANCE

PAYLOAD VERSUS RANGE
55% RATED POWER



CONDITIONS :

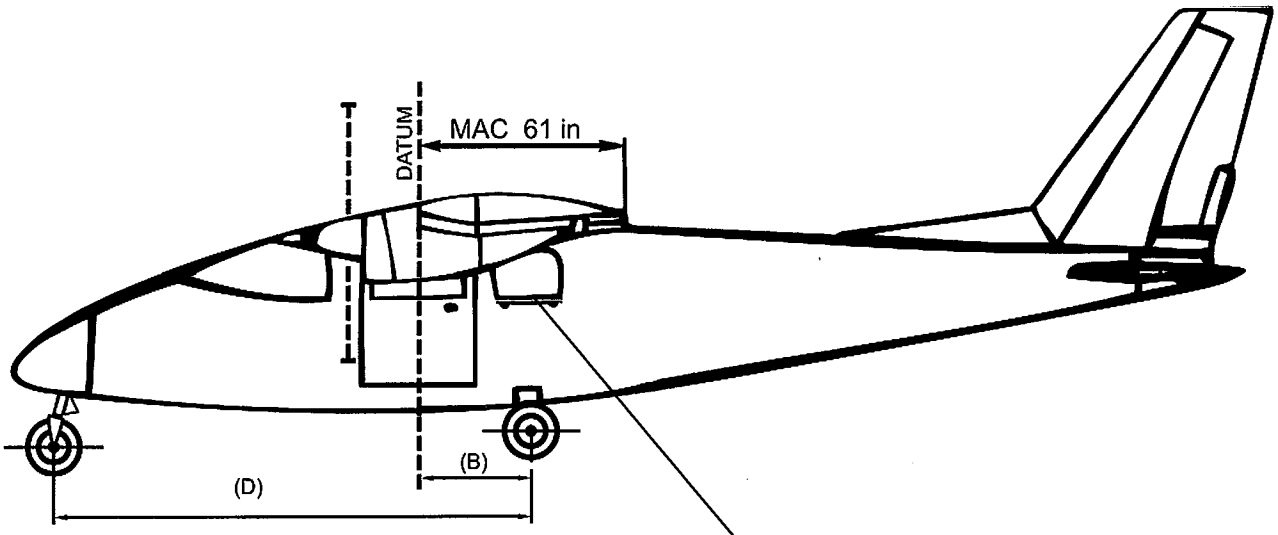
ISA, Zero Wind
TAS 150 Knots
Altitude: 1200 Feet
Fuel Consumption: 16.0 U.S. Gallons per Hour
Maximum Take-off Weight: 4321 Pounds
Basic Operating Weight: 2909 Pounds (Including 29 pounds unusable fuel, 170 pound Pilot, IFR Instrumentation, Avionics and Oil, excluding De-icing Equipment).
Fuel Consumption Allowance: (Take-off, Climb, Descent, Landing) : 7.0 U.S. Gallons

PARTENAVIA COSTRUZIONI AERONAUTICHE
NAPLES, ITALY

Report :
Page : 1
Model : P68B

REPORT NO.
ACTUAL WEIGHT AND BALANCE
AIRCRAFT MODEL P68B VICTOR

SERIAL NO.: IDENTIFICATION: DATE:



Levelling means Longitudinal Window Sill on Rear Right Window

Empty Weight as weighed (Includes Items checked on Equipment List)

Left Wheel
Right Wheel
Nose Wheel (N)

TOTAL (T) _____

EMPTY WEIGHT C.G. AS WEIGHED

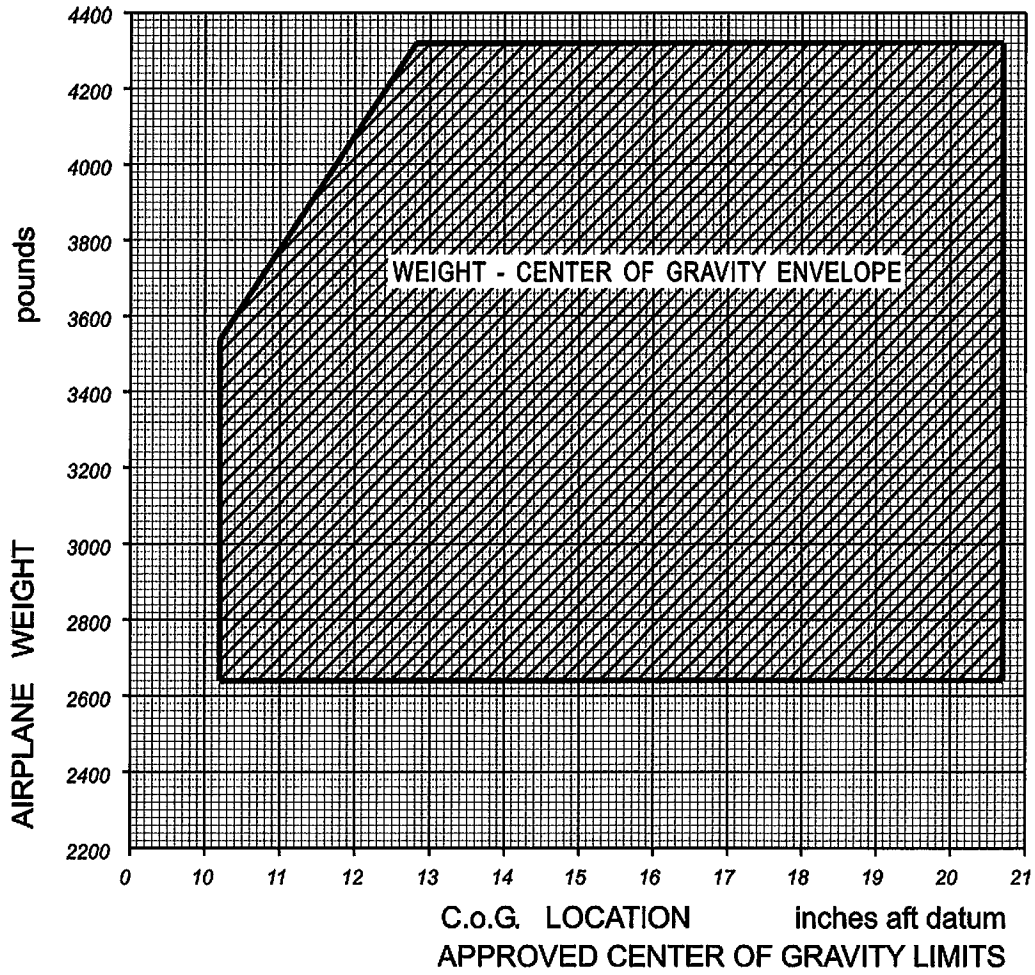
Empty Weight C.G. Aft Datum:

$$(B) - \frac{(N) \times (D)}{(T)} = \qquad \text{Inches } (A)$$

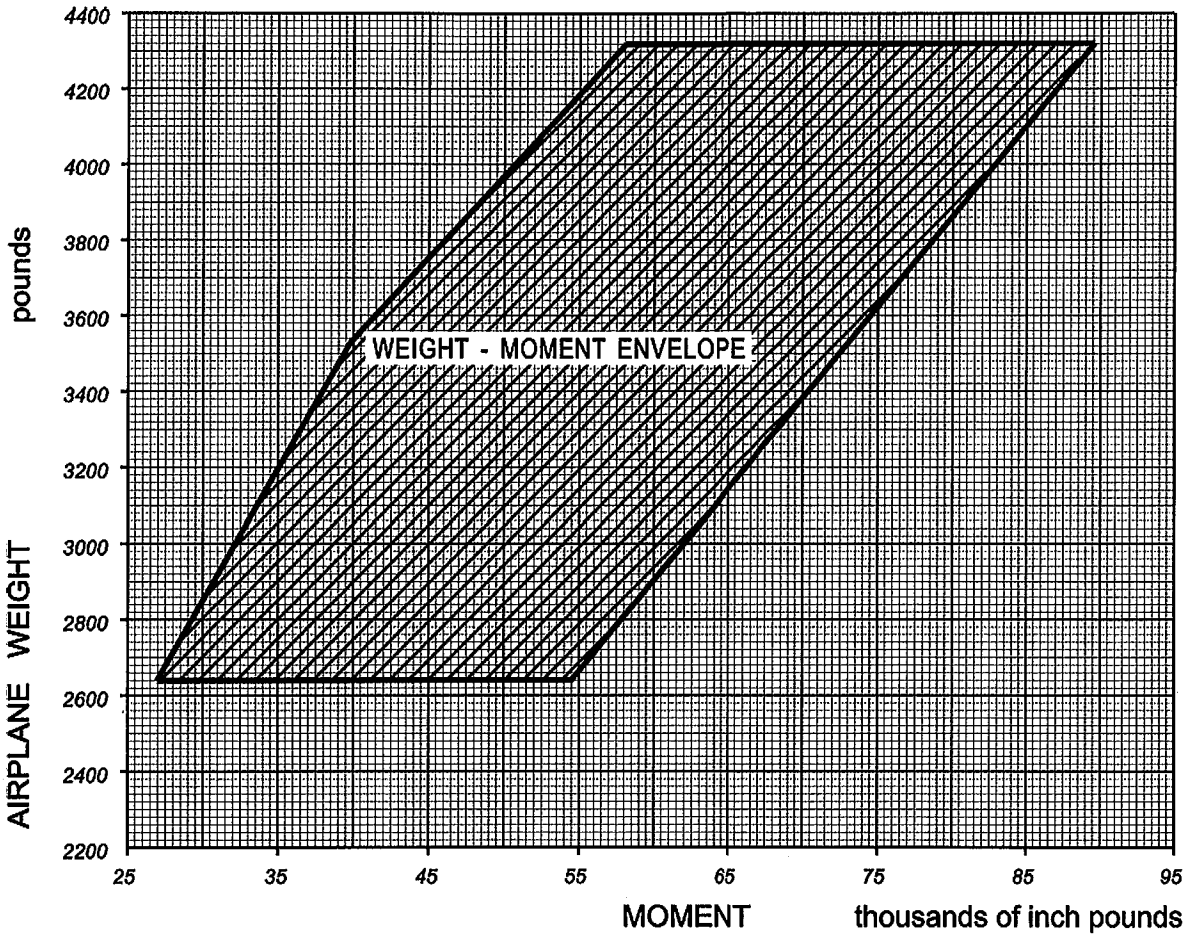
EMPTY WEIGHT AND C.G. WITH UNUSABLE FUEL

ITEM	WEIGHT	ARM	MOMENT
Empty Weight as weighed	(T) _____	(A) _____	_____
Unusable Fuel	28.6	30.3	866
Drainable Oil	29.0	4.0	116
	_____	_____	_____
BASIC WEIGHT AND C.G.	_____	_____	_____

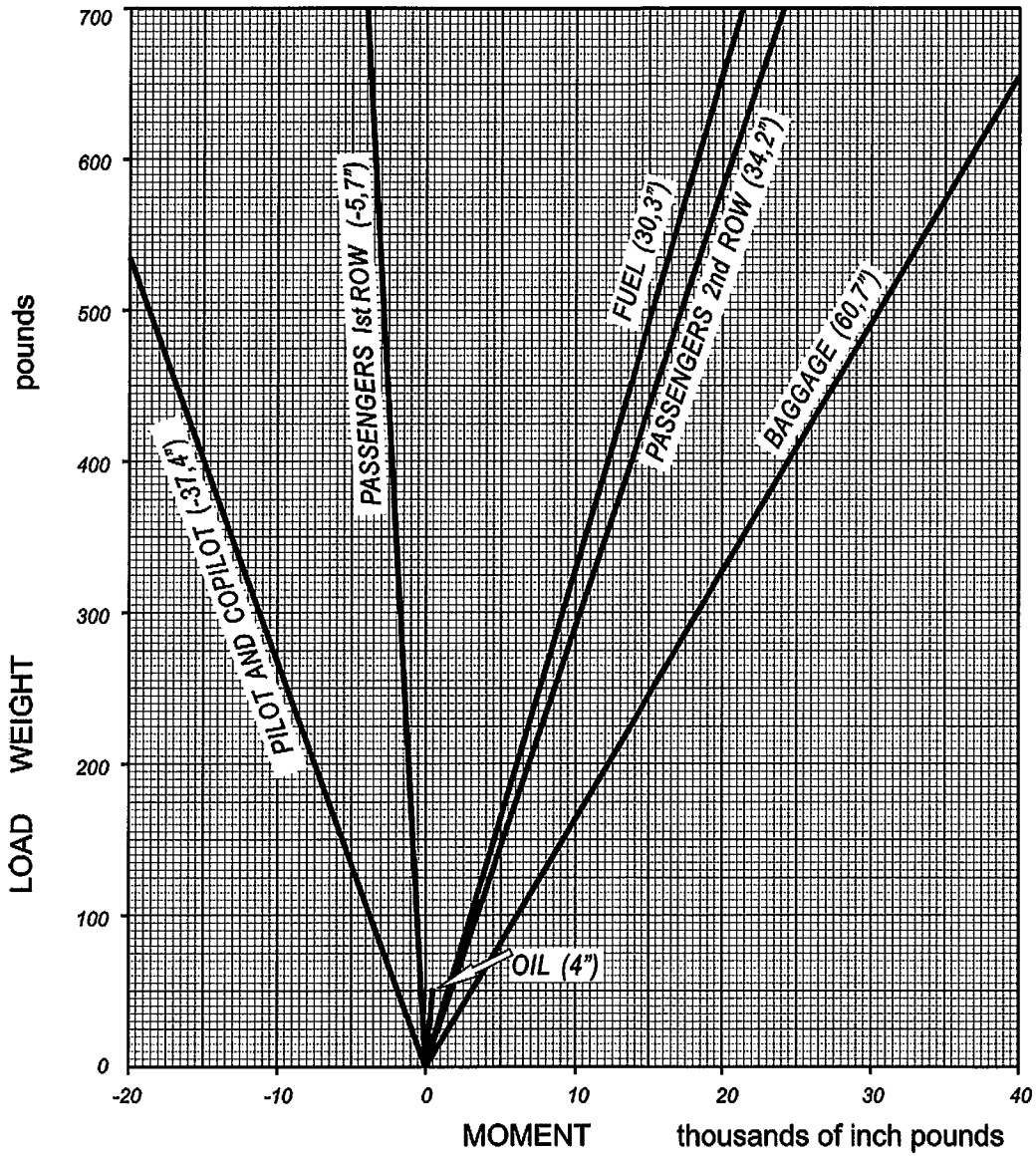
IT IS THE RESPONSIBILITY OF THE OWNER AND PILOT BEFORE ANY FLIGHT TO ASCERTAIN THAT THE AIRPLANE IS PROPERLY LOADED



CENTRE OF GRAVITY ENVELOPE



ANY POINT FALLING WITHIN THE ENVELOPE MEETS ALL BALANCE REQUIREMENTS



ADD WEIGHT OF ITEM TO BE CARRIED TO THE LICENSED EMPTY WEIGHT OF THE AIRCRAFT. ADD MOMENT IN THOUSANDS OF INCH POUNDS OF THESE ITEMS TO THE TOTAL AIRCRAFT MOMENT IN THOUSANDS OF INCH POUNDS FOUND ON THE CENTER OF GRAVITY ENVELOPE

AIRCRAFT MODEL P68B VICTOR – EQUIPMENT LIST

ITEM	Weight (Pounds)	Arm Aft Datum (Inch)
PROPELLER AND PROPELLER ACCESSORIES		
_____Two Propellers, Hartzell Model HC-C2YK-2CF/FC7666A-4	61.6 ea.	- 18.1
_____Two Spinners, Hartzell Model 836-29	3.6 ea.	- 21.6
ENGINE AND ENGINE ACCESSORIES – FUEL AND OIL SYSTEMS		
_____Two Engines, Lycoming Model IO-360-A1B6	358.0 ea.	- 3.2
_____Two Oil Coolers, Harrison Model AP13AU06-01	2.5 ea.	- 12.4
_____Two Engine Driven Fuel Pumps, AC Type Model 75247	2.0 ea	+ 9.8
_____Two Electric Rotary Fuel Pumps, One Weldon Model C8100-F Right and One Weldon Model C8100-F Left	3.0 ea.	+ 17.3
_____Two 24V Starters, Prestolite Model MHB 4010	13.0 ea.	- 7.9
_____Two Vacuum Pumps, One Airborne Mechanisms Model 211CC One Airborne Mechanisms Model 211CC	3.5 ea	+ 9.8
_____Two Hydraulic Governors, Woodward Model B 210655	4.6 ea.	+ 10.2
_____Two Induction Air Filters, Partenavia P/N 7.5053	1.0 ea.	- 13.8

AIRCRAFT MODEL P68B VICTOR – EQUIPMENT LIST

ITEM	Weight (Pounds)	Arm Aft Datum (Inch)
LANDING GEAR		
_____Two Main Wheel Brake Assemblies (with 40-96E Wheel Assemblies and 30-61E Brake Assemblies), 6.00-6 Type III, Cleveland Products	9.6 ea.	+ 31.5
_____Two Main Wheel 6-Ply Rating Tyres, 6.00-6 Type III with Regular Tubes.	9.4 ea.	+ 31.5
_____One Nose Wheel, 5.00-5, Type III, Partenavia P/N 4.5001	4.4	- 109.8
_____One Nose Wheel 6-Ply rating Tyre, 5.00-5, Type III, with Regular Tube	5.3	- 109.8
ELECTRICAL EQUIPMENT		
_____One 24V., 17 Ampere/Hour Battery, Teledyne Gill 12G CAB-9	33.7	+ 31.5
_____Two Landing Lights, G.E. Model 4594	1.0 ea.	+ 3.6
_____Rotating Beacon, Flight Components ACL 800-03-1100/10	1.6	+ 224.4
_____Two 24V, 70 Ampere Alternators, Prestolite ALU 8421 with Regulators, Brackets and Relays	13.0 ea.	- 11.8
_____Two Prestolite Overvolt Relays		
_____Two Prestolite Voltage Regulators P/N VSF-7403 with Brackets		

AIRCRAFT MODEL P68B VICTOR – EQUIPMENT LIST

ITEM	Weight (Pounds)	Arm Aft Datum (Inch)
ELECTRICAL EQUIPMENT (CONT.)		
_____Auxiliary Power Receptacle AN 2552-3A	0.9	+ 78.7
INTERIOR EQUIPMENT		
_____Two Front Seats, Partenavia P/N 8.1049	12.1 ea.	- 37.4
_____Two Middle Seats, Partenavia P/N 8.1049	12.1 ea.	- 5.7
_____One Rear Settee, Partenavia P/N 8.1093 – Two Passengers	23.1	+ 34.2
Partenavia P/N 8.1093 – Three Passengers	24.0	+ 34.2
MISCELLANEOUS EQUIPMENT		
_____Heated Pitot P/N AN5812-1	0.7	- 92.5
_____Stall Warning Indicator, Safe Flight P/N 164	0.3	- 59.0
_____Fire Extinguisher and Bracket	4.3	- 43.3
_____2ND Sensitive Altimeter, Aeritalia P/N 16050X	0.5	- 66.9
_____Dual Model 36/K Alcor Ekonomix EGT	0.8	- 59.0
RADIOS		
_____COM 1 _____	6.6	- 70.1
_____COM 2 _____	7.7	- 70.1
_____NAV 1 _____		- 70.1
_____NAV 2 _____		- 70.1
_____ADF _____	5.5	- 68.1
_____A/S Panel _____	1.2	- 67.1
_____MKR _____	1.2	- 67.1

AIRCRAFT MODEL P68B VICTOR – EQUIPMENT LIST

ITEM	Weight (Pounds)	Arm Aft Datum (Inch)
RADIOS (Cont.)		
_____TRANSPONDER	3.3	- 69.3
_____VOR Antenna	0.9	+ 222.4
_____COM 1 Antenna	0.9	+ 83.4
_____COM 2 Antenna	0.9	+ 24.66
_____VOR/LOC	2.0	- 66.9
_____VOR/ILS	2.5	- 66.9
_____DME	10.0	- 91.3
_____CONVERTER	5.2	- 87.4
_____CONVERTER	5.2	- 87.4
_____CONVERTER	5.2	- 87.4
_____CONVERTER	5.2	- 87.4
_____IFR Altimeter	1.5	- 68.9
_____IFR Gyro Horizon	2.0	- 68.9
_____Radar	22.0	- 75.0
_____HF	40.0	- 60.5
_____Autopilot	_____	_____
INSTRUMENTS		
_____ Magnetic Compass, Airpath P/N C-2400-L4VT	0.6	- 58.3
_____ Air Speed Indicator, Edo Aire Mitchell P/N 5172-2-PA	0.8	- 65.9
_____ Sensitive Altimeter, A.C.D. P/N 101735-01456	1.5	- 67.1
_____ Rate of Climb Indicator, Edo Aire Mitchell P/N 1403-8Z-PA	1.5	- 67.1
_____ Turn & Bank Indicator, Edo Aire Mitchell P/N 52D75-10	1.5	- 66.9
_____ Gyro Horizon, Edo Aire Mitchell P/N 23-501-05-2	2.0	- 67.1
_____ Directional Gyro, Edo Aire Mitchell P/N IU262-003-14	1.9	- 68.1
_____Dual Tachometer, General Electric P/N AN5531-2	3.0	- 66.7
_____ Gyro Horizon, Edo Aire Mitchell P/N 504-0006-94	_____	_____
_____ Directional Gyro, Edo Aire Mitchell P/N 505-0001-916	_____	_____

AIRCRAFT MODEL P68B VICTOR – EQUIPMENT LIST

ITEM	Weight (Pounds)	Arm Aft Datum (Inch)
INSTRUMENTS (Cont.)		
_____Dual Manifold, Edo Aire Mitchell P/N IU028-002-3	1.5	- 66.1
_____R & L Oil Temperature Gauge, Edo Aire P/N IU378-003-20	1.5	- 66.1
_____R & L Oil Pressure Gauge, Edo Aire Mitchell P/N IU378-003-20	1.5	- 66.1
_____R & L Cylinder Temperature Gauge, Edo Aire Mitchell P/N 22-804-019-6A	1.5	- 66.1
_____R & L Fuel Quantity Gauge, Farem P/N 179C	1.5	- 65.5
_____Ammeter & Voltmeter, Farem P/N 240-F	0.9	- 61.8
_____Free Air Thermometer, Rochester Gauge Inc. Model 1592-30	0.4	- 52.7
_____Flap Position Indicator, Farem P/N 193D	0.6	- 65.7
_____Gyro Suction, Airborne P/N IG2-1	0.6	- 65.3
_____Timer Heuer 8 Days	0.6	- 65.3
_____Hour Meter, van Dusen P/N 773-E-4-50	0.6	- 65.3
_____Remote Compass System	1.8	- 72.8
_____ Dual E.G.T., Alcor P/N 209A-1B	0.8	- 72.8
_____ Dual Fuel Flow Gauge, Edo Aire Mitchell P/N IU028-004-3	1.2	- 66.1
MISCELLANEOUS		
_____ Airborne-Kleber Wing/Empennage Pneumatic De-icing System with Goodrich Electrothermal propeller De-icing	+ 29.7	+ 67.0
_____ Goodrich Wing/Empennage Pneumatic De-icing System P/N 25S	+ 29.7	+ 67.0
_____ Goodrich Electrothermal De-icing System P/N 77.030	4.2	- 16.7
_____ Integral Auxiliary Wing Fuel Tanks	15.0	+ 28.0
_____ Clock, Aircraft Instuments P/N 16-105	_____	_____
_____ Airborne-Kleber Wing/Empennage Pneumatic De-icing System		
AUTOPILOTS		
_____ Edo Aire Mitchell Century III and Electric Trim Model AK 511	17.0	+ 34.0
_____ Bendix FCS.810	18.0	+ 33.0
_____ OCEM AP-3	15.0	+ 30.0

APPENDIX FOR MAXIMUM TAKE-OFF AND LANDING WEIGHT INCREASES

SECTION 1 – GENERAL

This appendix must be attached to the R.A.I. Approved Flight manual when the aircraft is operated at the following weights:

a. Maximum Take-off: 4387 Pounds (1990 Kilograms)

b. Maximum Landing: 4167 Pounds (1890 Kilograms)

For Limitations, Procedures and Performance data not contained in this appendix, consult the basic Aircraft Flight Manual.

NOTE: The Limitations, Performance Data and Information in this appendix must be considered as overriding the basic Aircraft Flight Manual where there is any conflict between the Appendix and Flight Manual.

SECTION 2 – LIMITATIONS

AIRSPEED LIMITATIONS

a. Manoeuvring Speed, V_A ..... 130 KIAS (126 KCAS)

WEIGHT AND CENTRE OF GRAVITY LIMITS

Weight Limits:

a. Maximum Take-off Weight: 4387 Pounds (1990 Kilograms)
b. Maximum Landing Weight: 4167 Pounds (1890 Kilograms)

Centre of Gravity Limits:

a. Aft Limit: 20.7 Inches /34% M.A.C.) Aft of Datum at all weights
b. Forward Limits: 13.03 Inches (21.4% M.A.C.) Aft of datum at 4387 Pounds
10.20 Inches (16.8% M.A.C.) Aft of datum at 3527 Pounds or less with straight line variation between these points.

Datum Location is at the Wing Leading Edge.

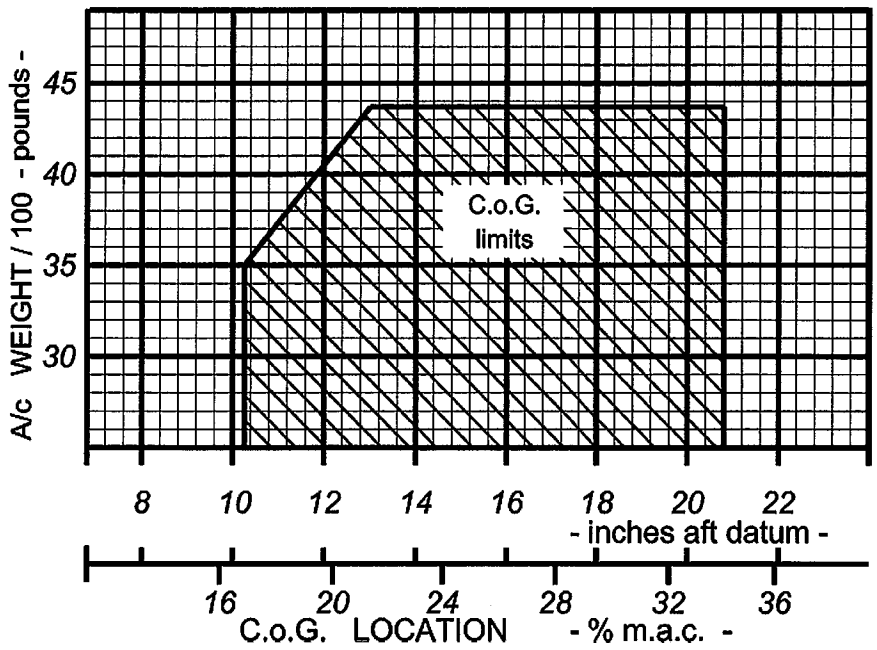


FIGURE 2-1

SECTION 3 – EMERGENCY PROCEDURES

No Changes

SECTION 4 – NORMAL PROCEDURES

No Changes

SECTION 5 – PERFORMANCE

NOTE: The Performance Data not included in this Appendix, may be obtained from Performance Charts in the basic Flight Manual, by extrapolating the variation with weight up to 4387 pounds.

STALL SPEEDS

CONDITIONS:

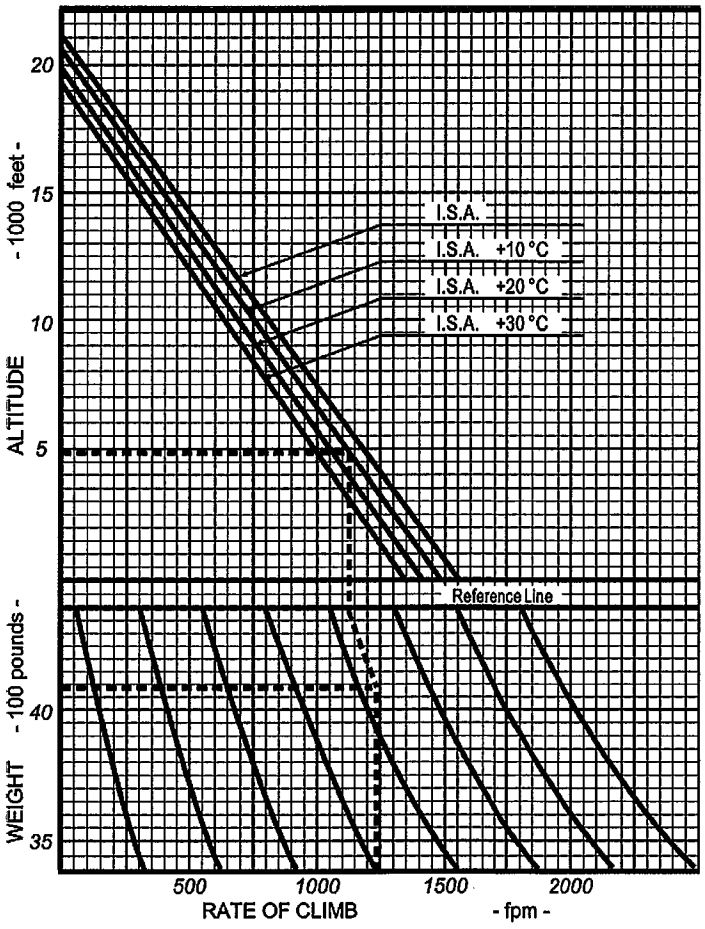
1. Throttle – IDLE
2. MAXIMUM take-off Weight – 4387 Pounds.

FLAPS	ANGLE OF BANK							
	0°		20°		40°		60°	
	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
0°	66	65	68	67	76	74	95	92
15°	63	61	65	63	73	70	90	86
35°	61	58	63	59	69	65	85	80

RATE OF CLIMB – MAXIMUM CLIMB

CONDITIONS:

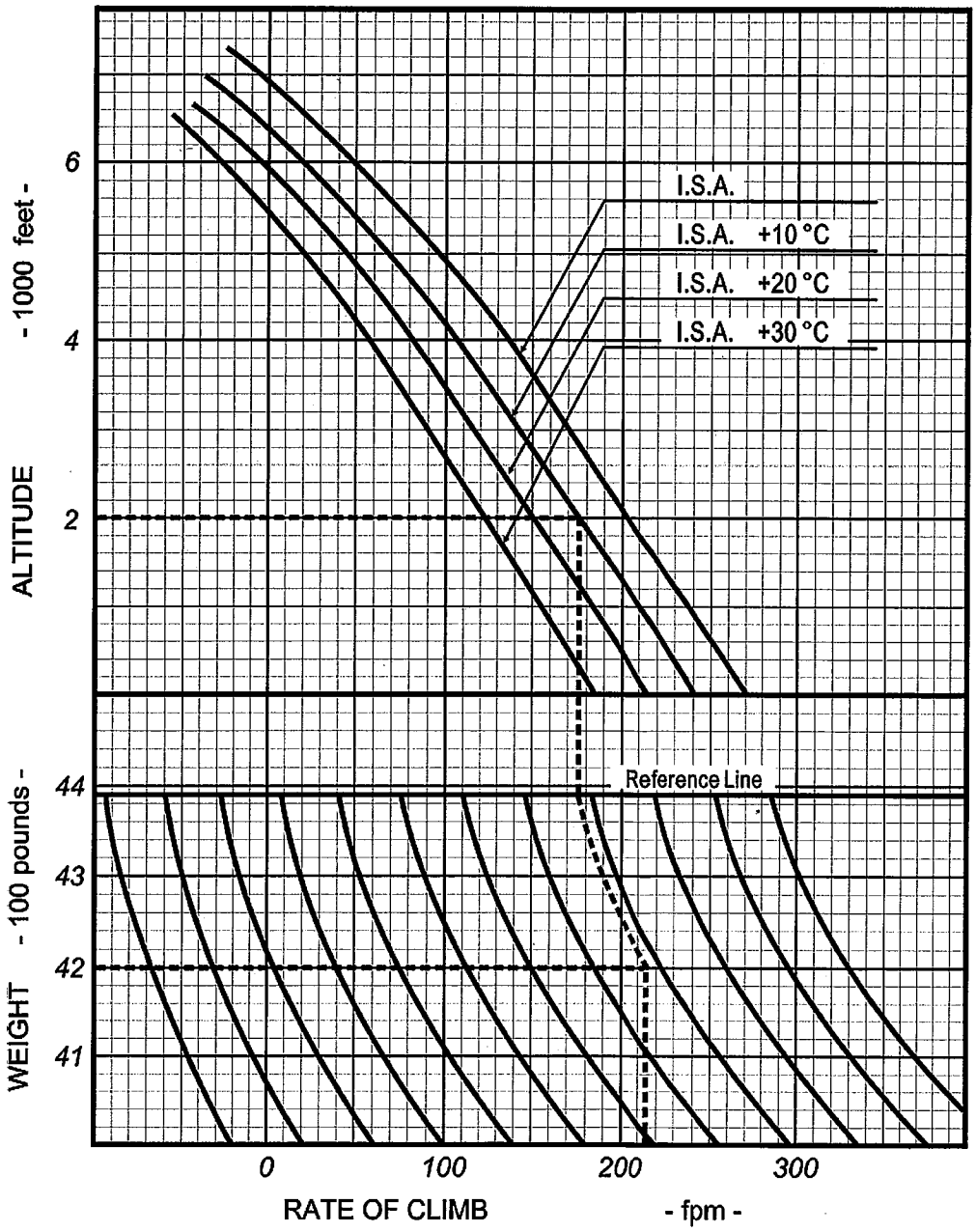
1. 2700 RPM and Full Throttle
2. Mixture – FULL RICH up to 5000 feet. At higher altitude, lean for smooth operation. Do not exceed 435 °F (224 °C) C.H.T.
3. Flaps – UP
4. Best rate of Climb Speed – 90 KIAS



RATE OF CLIMB – SINGLE ENGINE

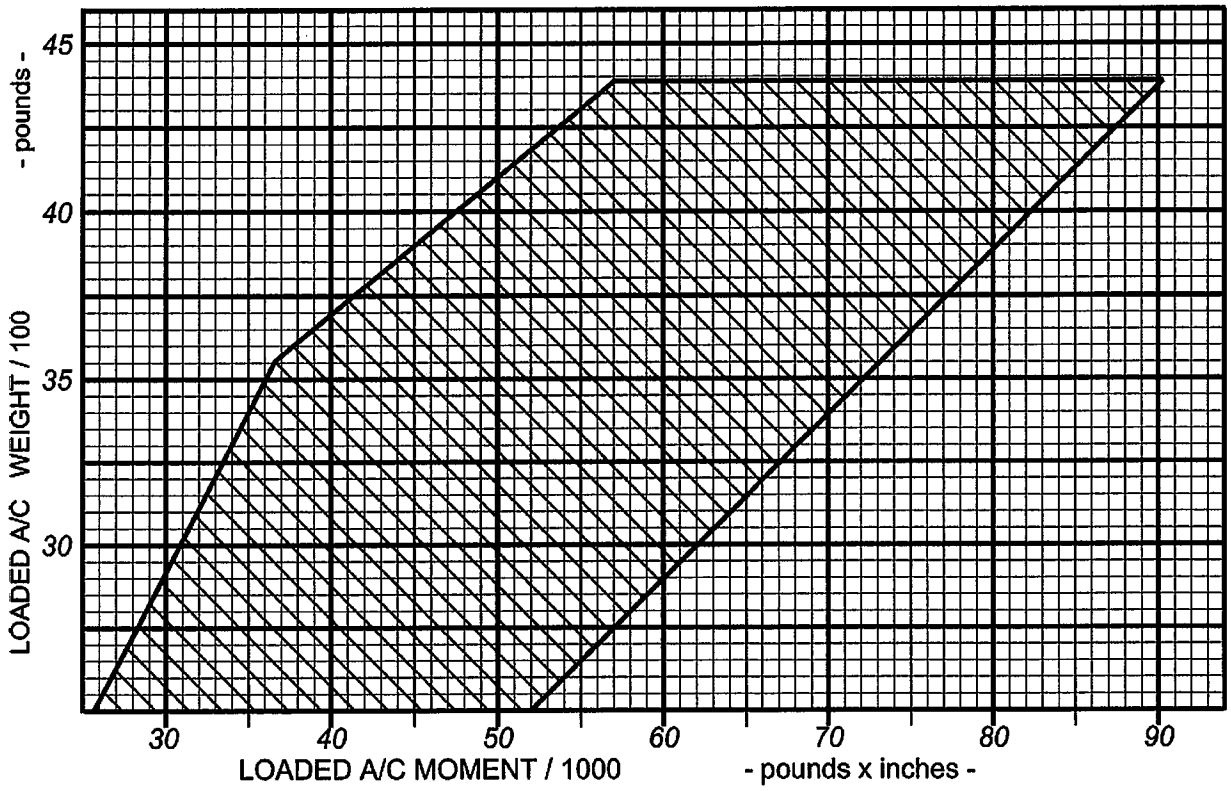
CONDITIONS:

5. 2700 RPM and Full Throttle
6. Mixture – FULL RICH up to 5000 feet. At higher altitude, lean for smooth operation. Do not exceed 435 °F (224 °C) C.H.T.
7. Flaps – UP
8. Best rate of Climb Speed – 88 KIAS



SECTION 6 – WEIGHT AND BALANCE

CENTER OF GRAVITY MOMENT ENVELOPE



SUPPLEMENT L — OPTIONAL AUXILIARY FUEL WING TANKS

SECTION 1 - DESCRIPTION

Optional auxiliary fuel tanks of integral type are contained in the wings outboard of the main tanks.
There are no separate fuel selector controls for these tanks. Fuel is pumped from the auxiliary fuel tank directly into the same side main tank with a fuel transfer pump through a switch located in the overhead fuel panel.
Indicator lights mounted near the main tanks fuel quantity indicator are illuminated by pressure switches when all usable fuel has been transferred.
To prevent overflow of the main tank fuel should not be transferred until the remaining fuel in the main tank is half full or less.

SECTION 2 - OPERATING LIMITATIONS & PLACARDS

Total fuel per aux. tank: 22.5 U.S.G. (85 lt)
Usable fuel per aux. tank: 21.5 U.S.G. (81 lt)
Near transfer pump switches:
« TRANSFER AUX. TANK FUEL WHILE IN LEVEL FLIGHT AND WITH THE MAIN TANK HALF FULL OR LESS ».
Near transfer pump lights:
« TURN TRANSFER PUMPS OFF WHEN LIGHTS ILLUMINATE ».
Near Auxiliary Fuel Tank Filler
« AUX. FUEL - 100/130 AVIATION GRADE MINIMUM - USABLE 21.5 U.S.G. ».
Near Auxiliary Fuel Tank Drain
« AUX. TANK DRAIN ».

SECTION 3 - OPERATING PROCEDURE

1) To transfer fuel from the Auxiliary Tank to the same side main tank:
   — Fuel transfer pump switch: ON

2) When fuel transfer has been completed the fuel pump transfer lights will illuminate, at that time:
   — Fuel transfer pump switch: OFF

NOTE 1

To avoid overflow of main tank do not start transfer with main tank more than half full.

NOTE 2

The transfer of all usable fuel is ensured only with the airplane in level flight.

NOTE 3

If fuel is transferred from only one auxiliary tank, to equalize fuel in main tank use crossfeed.

WARNING

Fuel transfer pumps use fuel for lubrication; there in order not to shorten their lives they should be turned off when the transfer lights illuminate.