3. Oxygen Regulators - "Checked and set" P, CP, FM, N

4. Battery master switch - ON.

5. APU/GTPU - ON.

6. Bus voltage - 26 to 29 volts.

7. Emergency inverter - Checked and OFF.

8. Inverter and instrument switches - NORMAL.

9. Circuit breakers - Set.

10. VHF/UHF radio - "ON." CP

11. Emergency hydraulic pump and pressure - "Checked." CP

12. Parking brakes - "Set." P

13. Gear safety pins - Remove.

14. Hydraulic bypass lever - DOWN.

15. Hydraulic selector - BRAKES.

16. Quantity gages - "Checked." P
17. Cowl flaps - "Open." P-CP
18. Cabin pressure controls - "Set." FM
19. Manifold pressure - "Checked." P
20. Heading indicator - "Set." P-CP
21. Autopilot - "Set and OFF." P
22. Servos - Disengaged.
23. Gear safety pins - "Aboard." FM
24. Antiskid brakes - "OFF." P
25. AIMS/IFF - "STANDBY." CP
26. Passenger briefing - "Completed." P
27. Before Starting Engines check - "Completed." FM

STARTING ENGINES.

1. Door warning lights - "OUT." P

2. Chocks - "In place." P-CP

3. Ground power unit - "Positioned." P

4. Fire guard - "Posted." P/CP

5. Start engines - "Start No. ." P
   "Turning No. ." FM

6. Starter selector - "OFF." FM

7. Starting Engines check - "Completed." FM

BEFORE TAXI.

1. Hydraulic pressure - Checked.

2. External power - "Removed." P;
   "APU/GTPU on line." FM

3. Battery selector switch - Plane battery.

4. Navigational radios - "ON." CP

5. Engine analyzer - ON.

6. Cabin - "Secure." FM/FT

7. Altimeters and radio altimeters - "Set." P-CP-N

8. Chocks - "Removed." P

9. Before Taxi check - "Completed." FM

TAXI.

1. Brakes - "Checked." P

2. Wing flaps - "Flaps UP." P; "Flaps UP." CP

3. Flight instruments - "Checked." P-CP-N

4. Taxi check - "Completed." FM

ENGINE RUNUP.

*1. Parking brakes - "Set/As required." P

*2. Wing flaps - "Flaps 20 degrees P; 20 degrees Set." CP

3. Manifold pressure lines (prior first flight of day) - "Purged." FM

*4. Temperatures and pressures - Checked.

*5. Mixtures - AUTO RICH.

*6. Engines - "RPM 1500." P-CP

7. Airfoil heaters and propeller deicers - Checked.

8. Propellers - "Checked and on No. 3." P

9. Generators - "Checked." CP

10. Propeller reverse (before first flight of day) - "Checked." P

*11. Propeller feathering - "Checked." CP-P

12. Throttles - "FIELD BAROMETRIC." P

13. Blowers - "Checked, and on LOW." CP

14. Magnetos - "Checked." P

*15. ADI - "As required." P/FM

*16. Booster pumps - LOW.

*17. Trim tabs - "Set." P

*18. Radios - "Set." P-CP

19. APU/GTPU - As required.

*20. Safety belt/shoulder harness - "Fastened." P-CP-FM

*21. Flight instruments - "Checked." P-CP-N-FM

*22. Crew briefing - "Completed." P-CP-N-FM

*23. Anticollision/navigation lights - Set.

*24. Windows - "Closed and locked." P-CP

25. Engine Runup check - "Completed." FM

BEFORE TAKEOFF.

1. Controls - "Unlocked and free." P

2. Mixtures - AUTO RICH and locked.

3. Anti-icing and deicing equipment - "Climatic" P; "Set." FM

4. Antiskid brakes - "ON." P

5. Cowl flaps - Set plus 3 degrees.

6. AIMS/IFF - "Set." CP

7. Before Takeoff check - "Completed." FM

TAKEOFF.

AFTER TAKEOFF/CLIMB.

1. ADI - OFF.

2. Landing lights - OFF and retracted.

3. Gear lever - NEUTRAL.

4. Hydraulic bypass lever - UP.

5. Pressurization and doors - Checked.

6. Fuel flows - Checked.

7. SEAT BELT/NO SMOKING lights - "As required." P

8. Cooling turbine switch - "NORMAL." CI

9. Antiskid brake - "OFF." P

10. APU/GTPU - "As required." FM

11. After Takeoff Climb check - "Completed." FM

CRUISE.

1. Cruise power - Set.

2. Radio altimeters - "As required." P-CP

3. Cabin pressurization - Checked and set.

4. Tank selectors - As required.

5. Booster pumps - As required.

6. ADI quantity - Checked.

7. Cruise check - "Completed." FM

DESCENT.

PHASE I.

1. Safety belt/shoulder harness - "Fastened." P-CP-FM

2. Start marker - As required.

3. Mixtures - AUTO LEAN DETENT.
4. Blowers - "LOW." P-FM
5. Windshield heat - Climatic.
6. Antiskid brakes - "ON." P
7. Fuel tank selector - MAIN.
8. Hydraulic bypass lever - DOWN.
9. Gear lever - "UP." FM
10. Radio altimeters - "Set." P-CP
11. Crew and passenger briefing - "Completed." P
12. Phase I check - "Completed." FM

PHASE II.

1. Altimeters - "Set." P-CP-N
2. Mixture - AUTO RICH.
3. RPM - "Rpm____." P; "Rpm_____." FM

4. Booster pumps - LOW.

5. Cabin pressure - Less than 1.8 psi.

6. Wing flaps - "Flaps____. "P, "_____ Set." CP

7. APU/GTPU - "As required." FM

8. SEAT BELT and NO SMOKING lights - ON.

9. Cabin - "Secure." FM/FT

10. Descent check - "Completed." FM

TRAFFIC PATTERN CHECK.

1. ADI - OFF.

2. RPM -"Rpm____. "P; "Rpm_____ Set." FM

3. Wing flaps - "Flaps____. " P; _____ Set." CP

4. Crew briefing - "Completed." P

5. APU/GTPU - "As required." FM
6. Traffic Pattern check - "Completed." FM

BEFORE LANDING.

1. RPM - "2400." FM
2. Landing gear - "Down, indicators checked." P-CP
3. Wing flaps - "30 degrees - set." CP
4. Landing lights - "As required." P/FM
5. Cowl flaps - As required.
6. ADI - "As required." P/FM
7. Before Landing check - "Completed." FM

AFTER LANDING.

1. Cowl flaps - OPEN.
2. Landing lights - As required.

3. Pitot and scoop heaters - OFF.
4. Controls - "Locked." FM, CP
5. Gear safety solenoid - Visually checked.
6. Propellers - Master lever forward.
7. Anti-icers - OFF.
8. Cabin heater - Set.
9. Booster pumps - OFF.
10. ADI - OFF.
11. Wing flaps - "UP." CP
12. Cabin pressure - Window open.
13. Anticollision/navigation lights - Set.
14. Turbine switch - OFF.
15. Antiskid brake - "OFF." P
16. AIMS/IFF/Radar - "As required." P, CP, N
17. After Landing check - "Completed." FM

ENGINE SHUTDOWN.

1. Engine analyzer - OFF.
2. Parking brakes - "Set." P
3. Mixtures - IDLE CUTOFF.
4. Ignition switches - OFF.
5. Battery selector switch - As required.
6. Chocks - "In place." P-CP
7. Brakes - "OFF." P
8. SEAT BELT light - OFF.
9. Engine Shutdown check - "Completed." FM

BEFORE LEAVING AIRCRAFT.

1. Oil coolers - OFF.
2. Cowl flaps - OFF.
3. Radios and radio altimeters - "OFF." P-CP-N

4. Inverters and instrument switches - OFF.

5. Fuel selectors - MAIN.

6. Carburetor air doors - Set.

7. Gear safety pins - Installed.

8. Circuit breakers - Set.

9. APU/GTPU - As required.

10. Battery master switch - As required.

11. Lights - As required.

12. AIMS/IFF classified codes - "As required." P/CP

13. Before Leaving Aircraft check - "Completed." FM

TAKEOFF CONDITIONS

DENSITY ALT_____FT

PRESSURE ALT_____FT DEW PT_____F

OAT_____C_____C CAT

WIND COMP_____KTS GROSS WT_____LBS

RUNWAY LENGTH_____FT SLOPE_____

RUNWAY CONDITION READING_____

SIGNIFICANT OBSTACLE HEIGHT_____

DIST FROM END OF RUNWAY_____

GROSS WT LIMITED BY CLIMBOUT OVER OBSTACLE_____

GROSS WT LIMITED BY 3-ENG RATE OF CLIMB_____

TAKEOFF DATA

	WET	DRY
PREDICTED/MAX MAP	_____IN.HG	_____IN.HG
95% PREDICTED BMEP	_____PSI	_____PSI
TAKEOFF FACTOR	_____	_____
CRITICAL FLD LENGTH	_____FT	_____FT
GROUND RUN	_____FT	_____FT
REFUSAL SPEED	_____KIAS	_____KIAS
ACCELERATION TIME CHECK	_____SEC	_____SEC
ACCELERATION CHECK TIME	_____KIAS	_____KIAS

LIFTOFF SPEED_____KIAS

DUMP TIME_____MIN

LANDING DATA (TAKEOFF WEIGHT)

LANDING GROUND ROLL_____

THRESHOLD SPEED (130% Vso)_____KIAS

LANDING DISTANCE FROM 50 FT HEIGHT_____FT

LANDING CONDITIONS

PRESSURE ALT_____FT

OAT_____ C

WIND COMP_____KTS GROSS WT_____LBS

RUNWAY LENGTH_____FT SLOPE_____

DENSITY ALT_____FT

RUNWAY CONDITION READING_____

LANDING DATA

THRESHOLD SPEED (130% Vso)_____ KIAS

LANDING DISTANCE FROM 50 FT HEIGHT_____ FT

LANDING GROUND ROLL_____

PEFORMANCE DATA

TABLE OF CONTENTS

Tabulated Brake Horsepower Available, Wet and Dry, and Takeoff Factor

PRESSURE ALTITUDE	OUTSIDE AIR TEMP	DENSITY ALTITUDE	DEW POINT	WET			DRY		
				MAX MAP	95% BMEP	TAKEOFF FACTOR	MAX MAP	95% BMEP	TAKEOFF FACTOR
S.L.	−15	−3800	—	59.5	240	−2.8	60.2	221	- 1.5
	−05	−2400	—	60.5	240	−1.4	61.2	221	- .1
	5	−1200	36°F	62.2	240	−0.3	63.2	220	1.2
	15	S.L.	53°F	62.4	234	1.3	63.4	214	2.8
	25	1100	64°F	62.6	228	2.9	63.6	208	4.3
	35	2300	72°F	62.8	222	4.5	63.8	202	6.0
	45	3300	76°F	62.9	217	5.8	63.9	197	7.4
1000	−25	−3900	—	57.9	240	−3.0	58.4	221	- 1.6
	−15	−2500	—	58.9	240	−1.6	59.8	221	- .2
	−05	−1200	—	59.8	240	−0.3	60.9	221	1.1
	5	100	36°F	61.5	240	1.0	62.9	220	2.4
	15	1200	53°F	61.6	234	2.5	63.0	214	4.0
	25	2400	64°F	61.8	228	4.1	63.0	207	5.7
	35	3500	72°F	61.8	222	5.6	62.3	196	7.7
	45	4600	76°F	61.8	217	7.1	62.0	189	9.2
2000	−25	−2600	—	57.4	240	−1.6	58.2	221	- .3
	−15	−1200	—	58.4	240	−0.3	59.5	221	1.1
	−05	S.L.	—	59.2	240	0.9	60.5	221	2.2
	5	1300	36°F	60.8	240	2.2	62.3	219	3.7

NOTE: REFER TO PAGE P-4 FOR DATA SOURCE.

	15	2500	53°F	60.9	234	3.8	62.0	208	5.7
	25	3600	64°F	60.9	228	5.3	61.2	199	7.5
	35	4700	72°F	60.9	222	6.9	60.6	189	9.4
	45	5800	76°F	59.8	213	8.5	60.0	182	11.0
4000	−25	−100	—	56.4	240	0.8	58.7	221	2.1
	−15	1200	—	57.3	240	2.1	60.0	221	3.4
	−05	2500	—	58.3	240	3.4	59.2	214	5.2
	5	3700	36°F	58.2	231	5.2	58.7	203	7.3
	15	4900	53°F	57.4	221	7.0	58.0	193	9.2
	25	6000	64°F	56.8	212	8.8	57.2	184	11.0
	35	7100	72°F	56.2	202	10.6	56.4	176	12.8
6000	−25	2500	—	56.1	240	3.4	56.4	212	5.3
	−15	3800	—	55.5	232	5.2	55.7	206	7.1
	−05	5000	—	54.7	223	7.0	55.0	199	8.8
	5	6200	36°F	54.1	213	8.9	54.3	188	10.9
	15	7300	53°F	53.5	203	10.7	53.6	180	12.5
	25	8400	64°F	52.9	193	12.5	53.0	172	14.3
	35	9500	72°F	52.3	185	14.2	52.4	165	15.9

NOTE: REFER TO PAGE P-4 FOR DATA SOURCE.

NOTE

a. The pressure altitude, outside air temperature and density altitude data are obtained from Figure A1-9, T.O. 1C-118A-1-1.

b. The dew points are typical values for the conditions of Step (a).

c. The "MAX MAP" values are standard day values corrected for dew point.

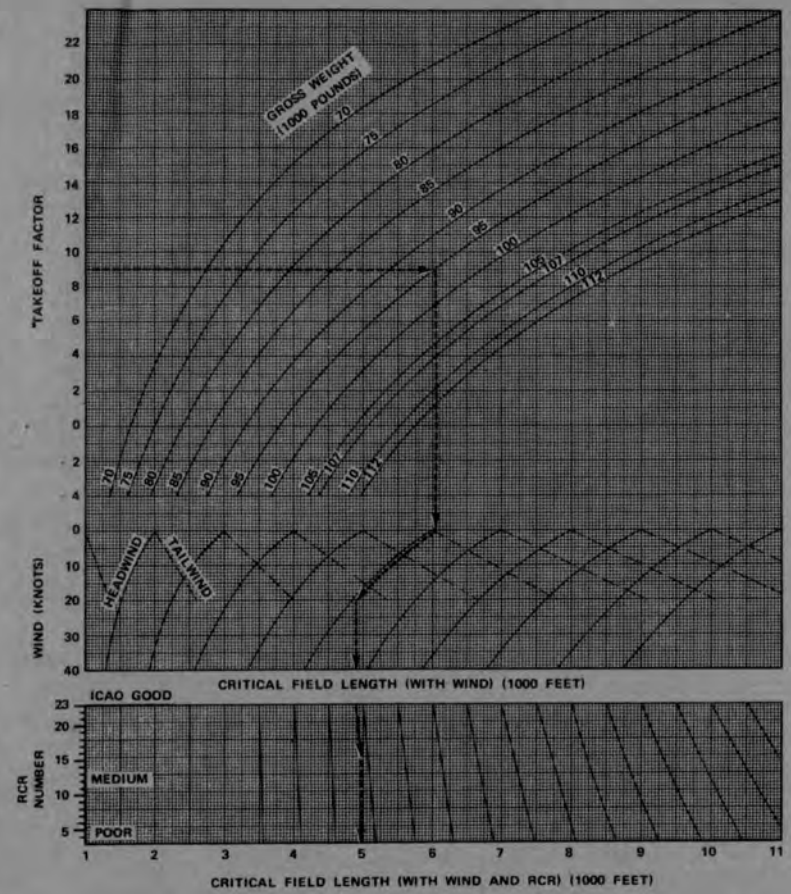
d. The "95% BMEP WET" values are obtained from Figure A2-2, T.O. 1C-118A-1-1, for the conditions given in Step (a) and (b).

e. The Takeoff Factor is read from Figure A3-2, T.O. 1C-118A-1-1, for the values of density altitude and 95% BMEP.

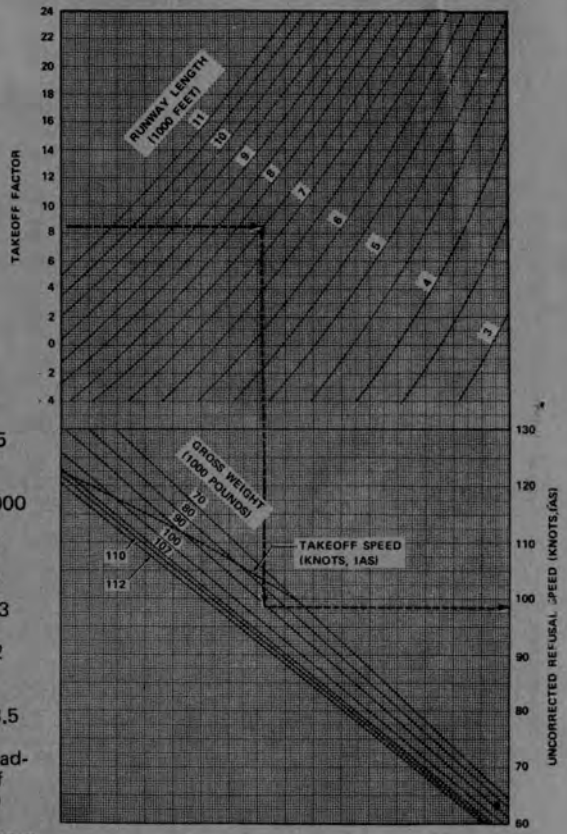
f. The "95% BMEP DRY" values are obtained from Figure A2-3, T.O. 1C-118A-1-1, for the conditions given in Step (a) and (b).

TAKEOFF PERFORMANCE – CRITICAL FIELD LENGTH – BRAKES ONLY

2800 RPM
WING FLAPS 20 DEGREES



TAKEOFF PERFORMANCE – REFUSAL SPEED – BRAKES ONLY
2800 RPM
WING FLAPS 20 DEGREES



SAMPLE PROBLEM:

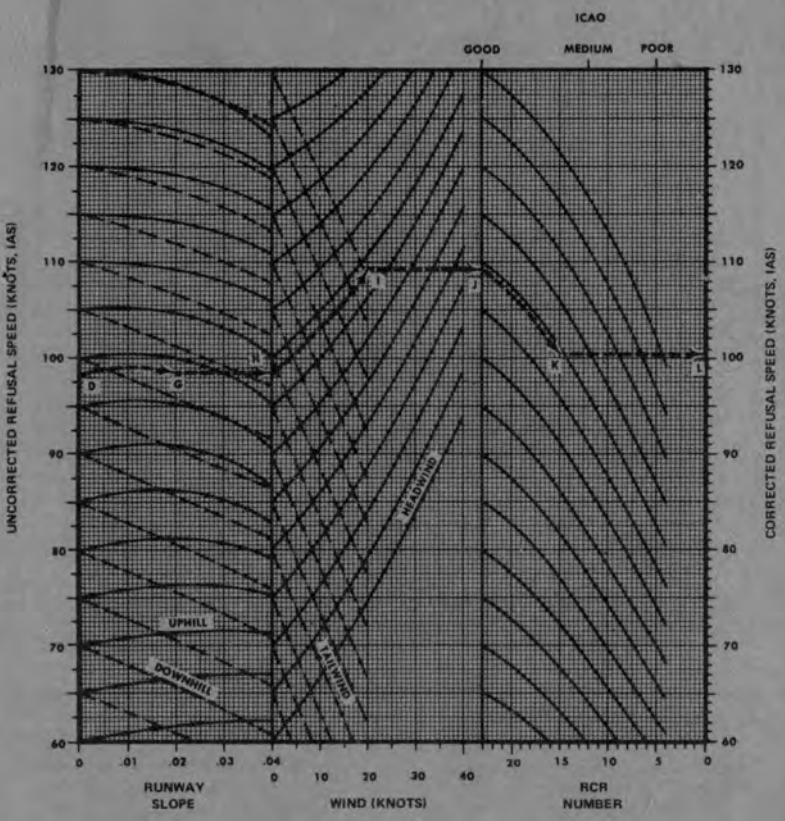
A. Takeoff factor = 8.5
B. Runway length = 7500 feet.
C. Gross weight = 92,000 pounds.
D. Uncorrected refusal speed = 98.5 knots.
E. Takeoff speed line.
F. Takeoff speed = 113 knots (IAS).
G. Runway slope = .02 uphill.
H. Refusal speed with slope, no wind = 98.5 knots.
I. Wind = 20 knots headwind (50 percent of reported headwind)
J. Refusal speed with wind and slope = 109.5 knots (IAS).
K. RCR = 15.
L. Refusal speed corrected for slope, wind and RCR = 100.5 knots (IAS).

NOTE:
Whenever takeoff speed (corrected for crosswind as necessary) is less than corrected refusal speed, use takeoff speed for refusal speed.

(Sheet 1 of 2)

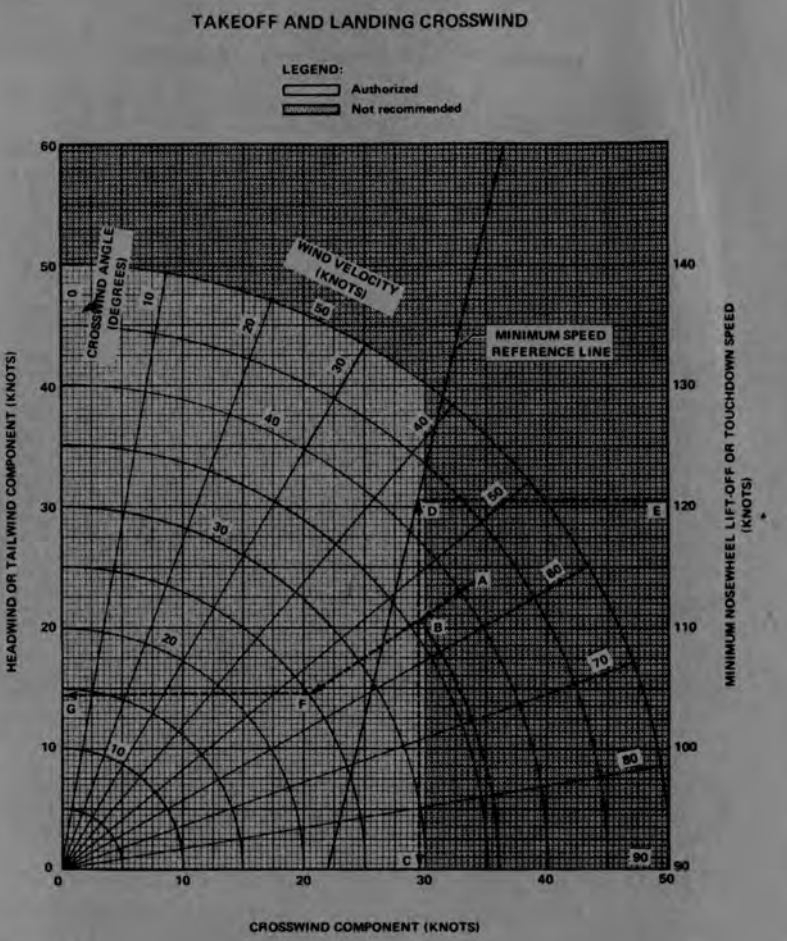
TAKEOFF PERFORMANCE – REFUSAL SPEED
BRAKES ONLY
2800 RPM
WING FLAPS 20 DEGREES

EFFECT OF RUNWAY SLOPE, WIND AND RUNWAY CONDITION



(Sheet 2 of 2)

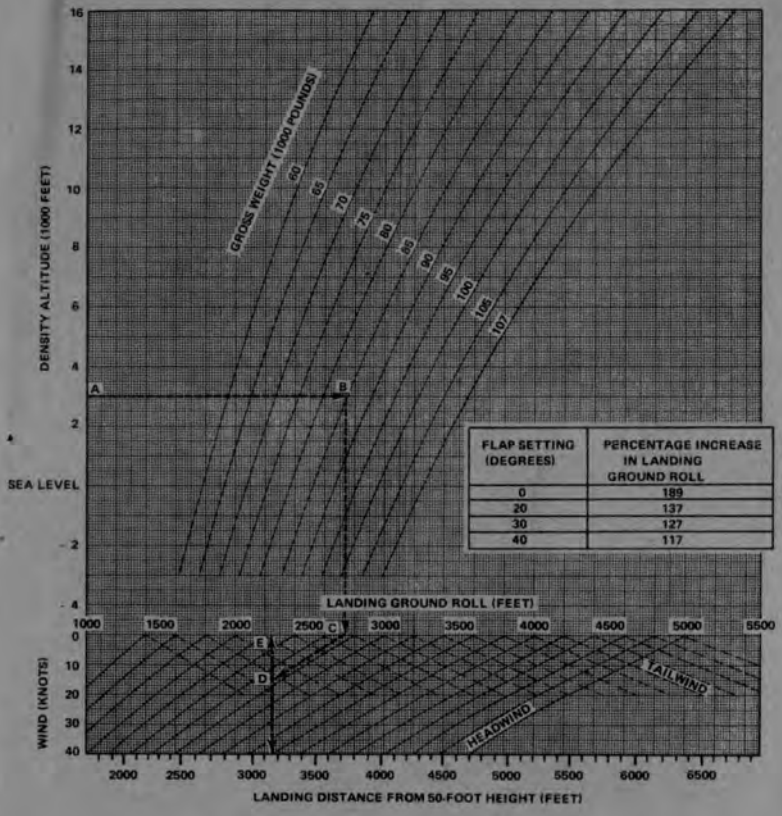
TAKEOFF AND LANDING CROSSWIND



NOTES:

1. Enter chart with maximum gust velocity for crosswind and tailwind components.
2. Use maximum steady wind velocity for headwind component.
3. Whenever minimum nosewheel liftoff or touchdown speed is increased due to crosswind component, the takeoff ground run or landing ground roll must be corrected for new speed.

LANDING GROUND ROLL – BRAKES ONLY



FLAP SETTING (DEGREES)	PERCENTAGE INCREASE IN LANDING GROUND ROLL
0	189
20	137
30	127
40	117

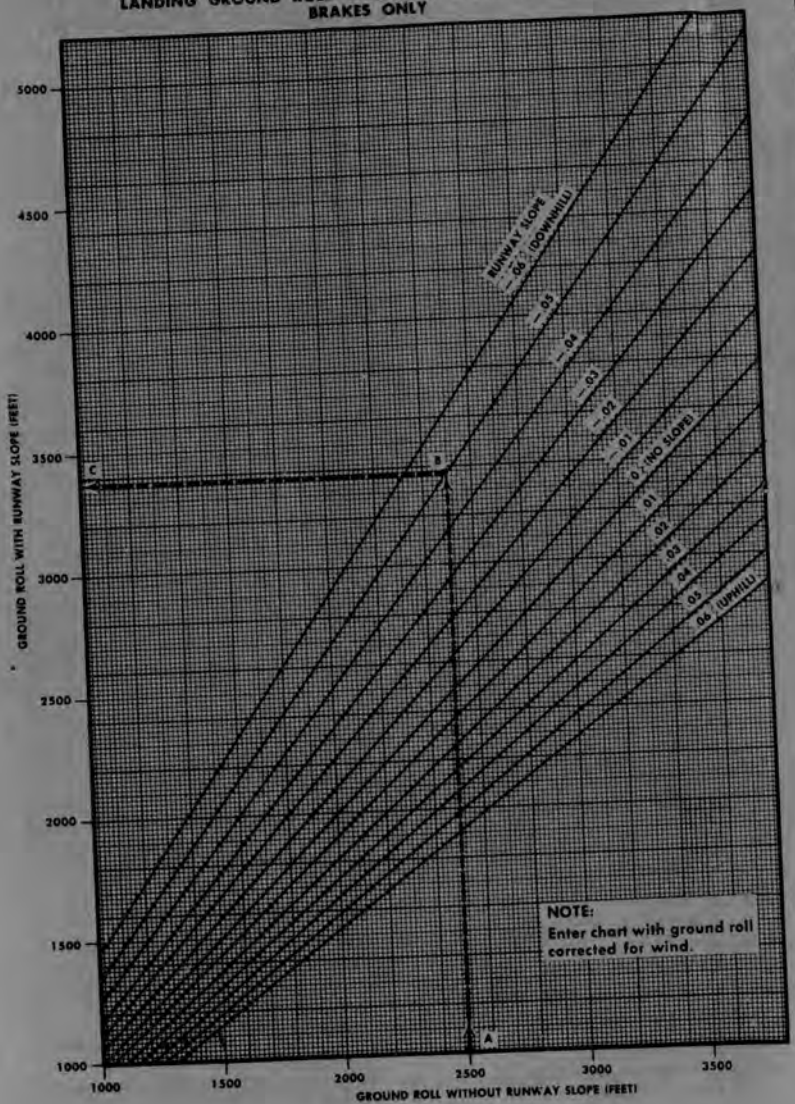
NOTES:

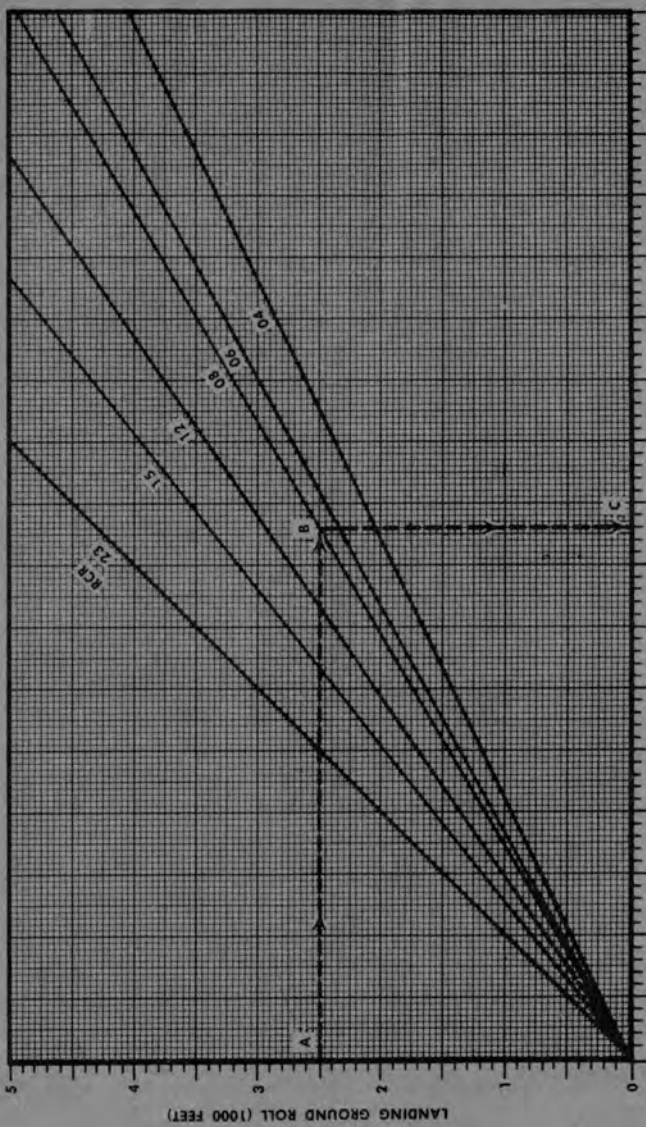
1. Based on dry, hard surface runway.
2. Based on wing flaps full down. For ground roll at other flap settings see table.
3. Threshold speed = 130 percent of stall speed.
4. Touchdown speed = 120 percent of stall speed.

SAMPLE PROBLEM:

A. Density altitude = 3000 feet.
B. Gross weight = 85,000 pounds.
C. Landing ground roll no wind = 2740 feet.
D. Headwind = 30 knots.
E. Landing ground roll with wind = 2250 feet.
F. Landing distance from 50 feet height = 3150 feet.

LANDING GROUND ROLL — RUNWAY SLOPE CORRECTION
BRAKES ONLY




EFFECT OF UNUSUAL RUNWAY CONDITIONS ON LANDING GROUND ROLL
LANDING GROUND ROLL (1000 FEET)
CORRECTED LANDING GROUND ROLL (1000 FEET)
0
1
2
3
4
5
6
7
8
A
B
C
.04
.06
.08
.12
.15
.23
RCR