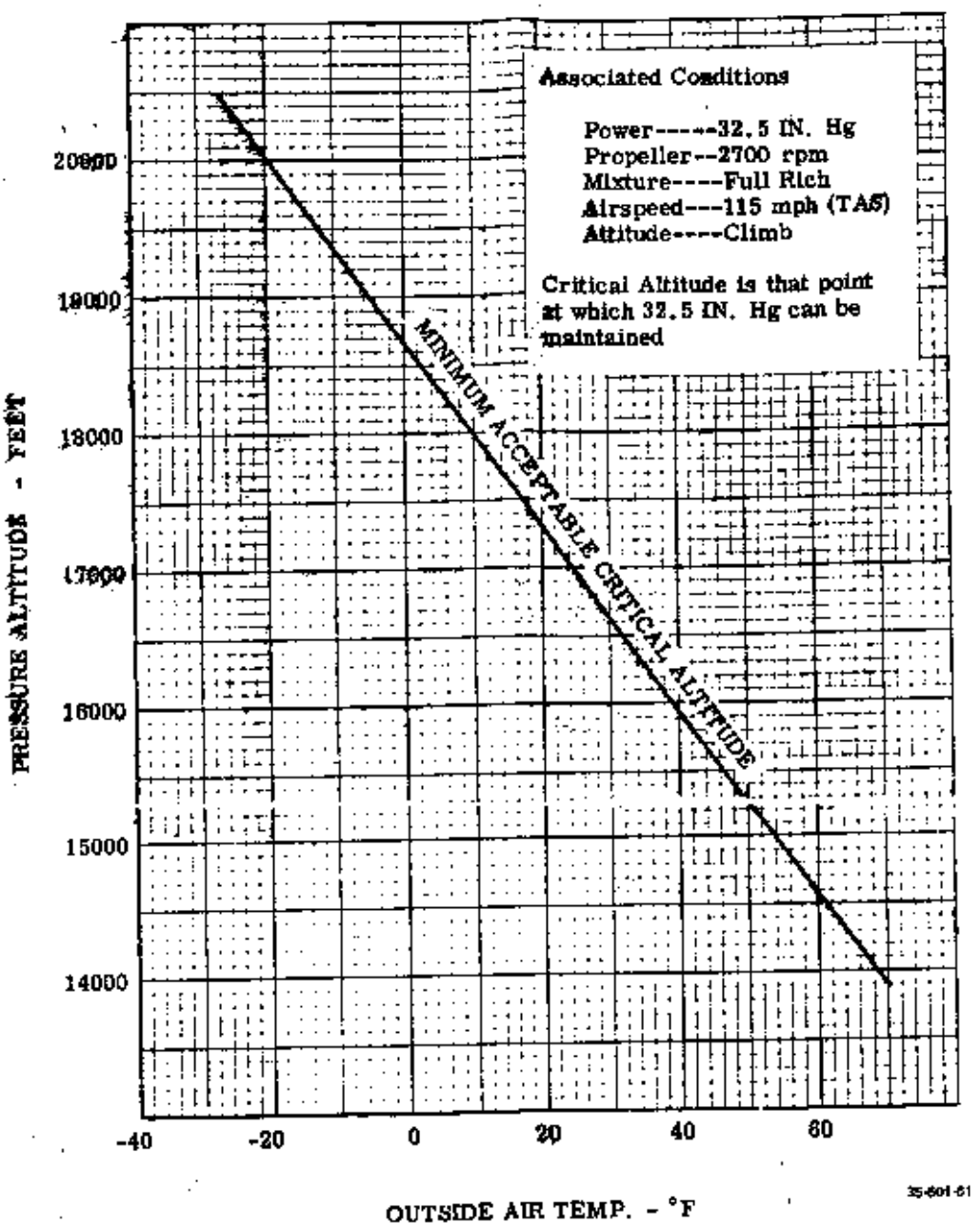


Figure 3-15C. Critical Pressure Altitude Vs. OAT Graph

NORMAL TAKE-OFF

ASSOCIATED CONDITIONS:

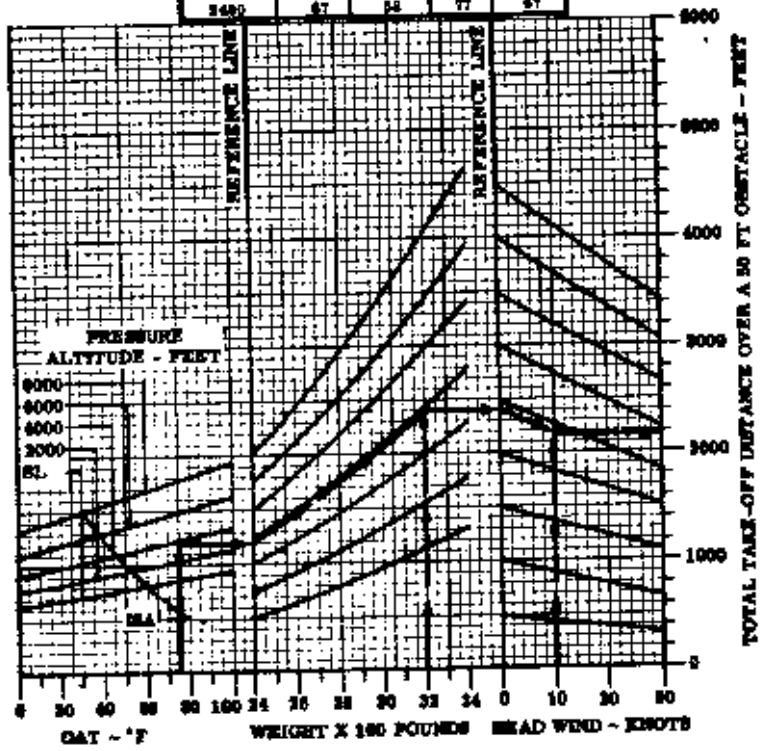
POWER	TAKE-OFF POWER SET BEFORE BRAKE RELEASE
FLAPS	UP
RUNWAY	PAVED, LEVEL, DRY SURFACE
TAKE-OFF SPEED	IAS AS TABULATED

NOTE: GROUND ROLL IS APPROX. 59% OF TOTAL TAKE-OFF DISTANCE OVER A 50 FT OBSTACLE.

EXAMPLE:

OAT	75°F
PRESSURE ALTITUDE	4000 FT
TAKE-OFF WEIGHT	3300 LBS
HEAD WIND	10 KNOTS
TOTAL TAKE-OFF DISTANCE OVER A 50 FT OBSTACLE	2150 FT
GROUND ROLL (59% OF 2150)	1268 FT
IAS TAKE-OFF SPEED LIFT-OFF	78 MPH
AT 50 FT	86 MPH

WEIGHT POUNDS	IAS TAKE-OFF SPEED (ASSUMES ZERO INSTR. ERROR) LIFT-OFF MPH	LIFT-OFF KNOTS	50 FEET MPH	50 FEET KNOTS
3400	81	70	92	80
3200	79	69	88	76
3000	76	66	87	76
2800	73	63	84	73
2600	70	61	80	70
2400	67	58	77	67



OBSTACLE TAKE-OFF

ASSOCIATED CONDITIONS:

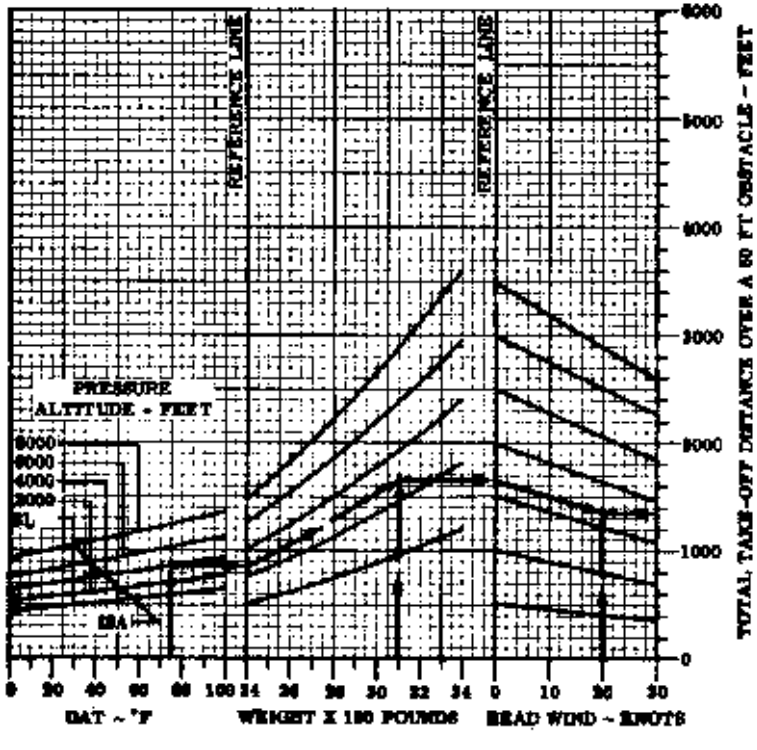
POWER	TAKE-OFF POWER SET BEFORE BRAKE RELEASE
FLAPS	20°
RUNWAY	PAVED, LEVEL, DRY SURFACE
TAKE-OFF SPEED	IAS AS TABULATED

NOTE: GROUND ROLL IS APPROX. 73% OF TOTAL TAKE-OFF DISTANCE OVER A 50 FT OBSTACLE.

EXAMPLE:

OAT	75°F
PRESSURE ALTITUDE	4000 FT
TAKE-OFF WEIGHT	3100 LBS
HEAD WIND	20 KNOTS
TOTAL TAKE-OFF DISTANCE OVER A 50 FT OBSTACLE	1350 FT
GROUND ROLL (73% OF 1350)	986 FT
IAS TAKE-OFF SPEED LIFT-OFF	74 MPH
AT 50 FT	74 MPH

WEIGHT POUNDS	IAS TAKE-OFF SPEED (ASSUMES ZERO INSTR. ERROR) LIFT-OFF MPH	LIFT-OFF KNOTS	50 FEET MPH	50 FEET KNOTS
3400	77	67	77	67
3200	75	65	75	65
3000	72	63	72	63
2800	69	60	69	60
2600	66	57	66	57
2400	63	55	63	55

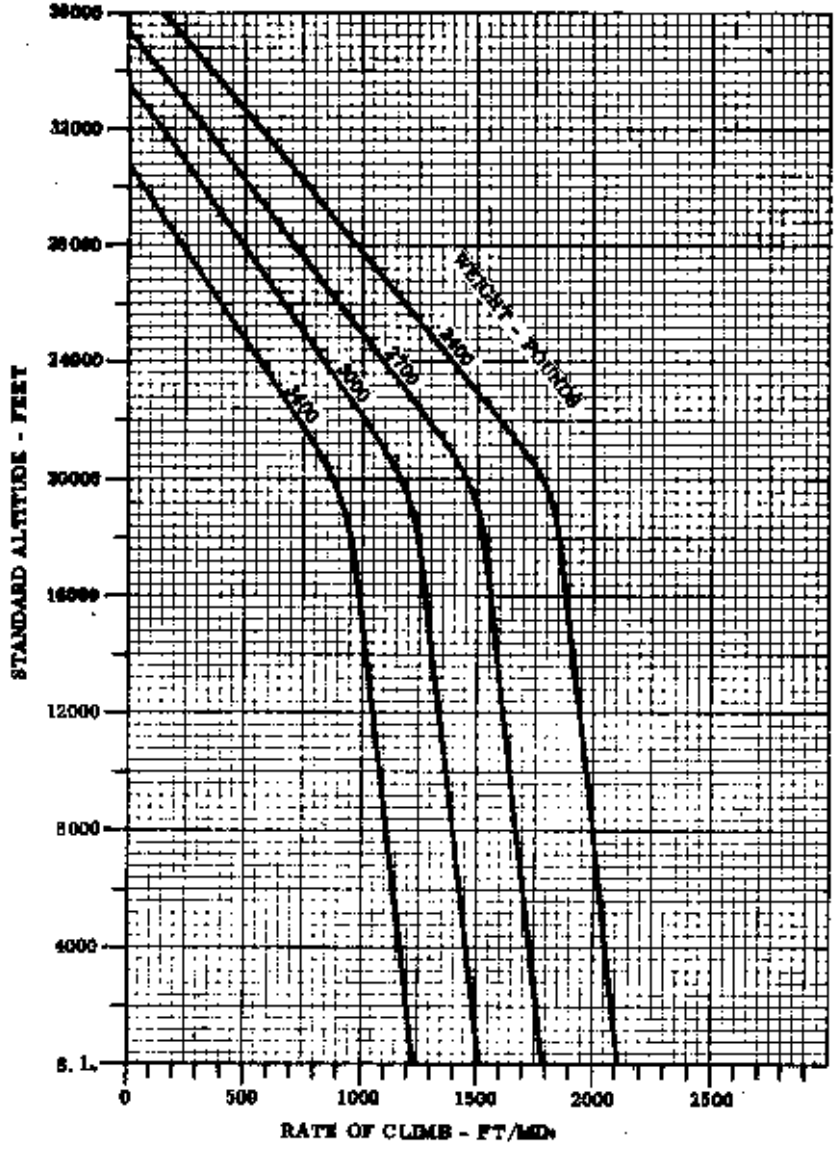


MAXIMUM CLIMB

RATE OF CLIMB

ASSOCIATED CONDITIONS:

POWER	MAXIMUM CONTINUOUS POWER
FLAPS	UP
GEAR	UP
AIRSPEED	BEST RATE-OF-CLIMB SPEED

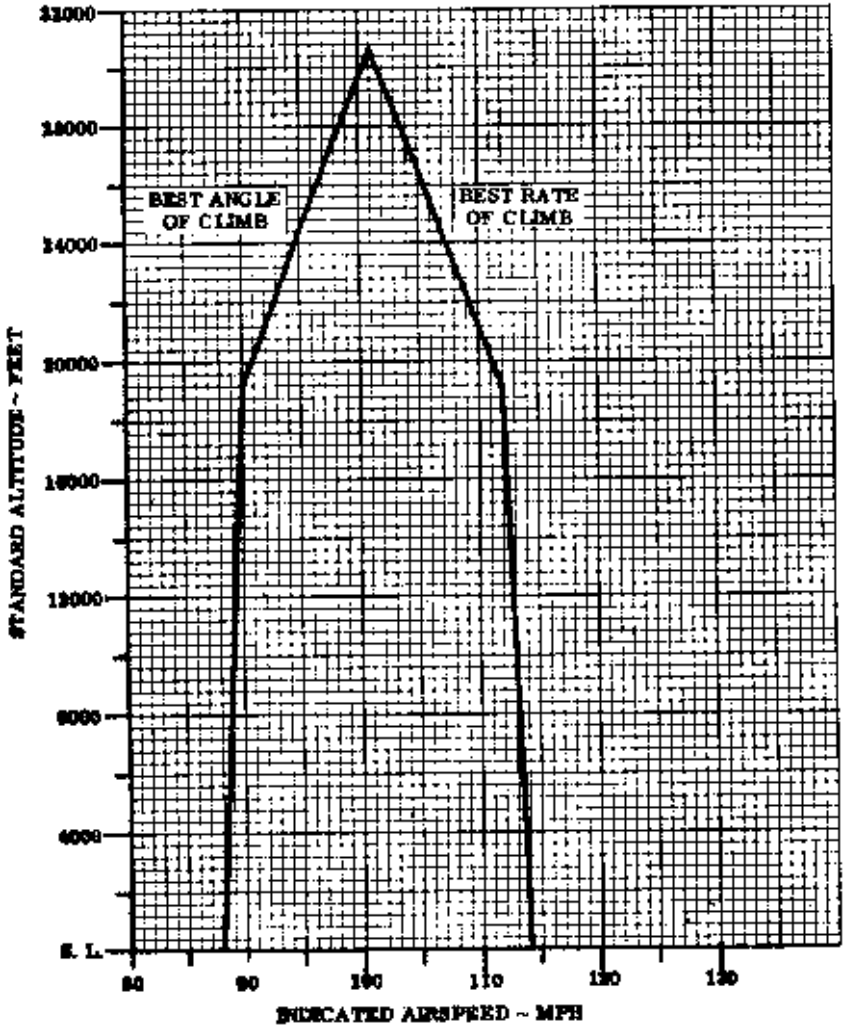


MAXIMUM CLIMB

CLIMB SPEEDS

ASSOCIATED CONDITIONS:

POWER	MAXIMUM CONTINUOUS POWER
WEIGHT	3400 LBS
GEAR	UP
FLAPS	UP

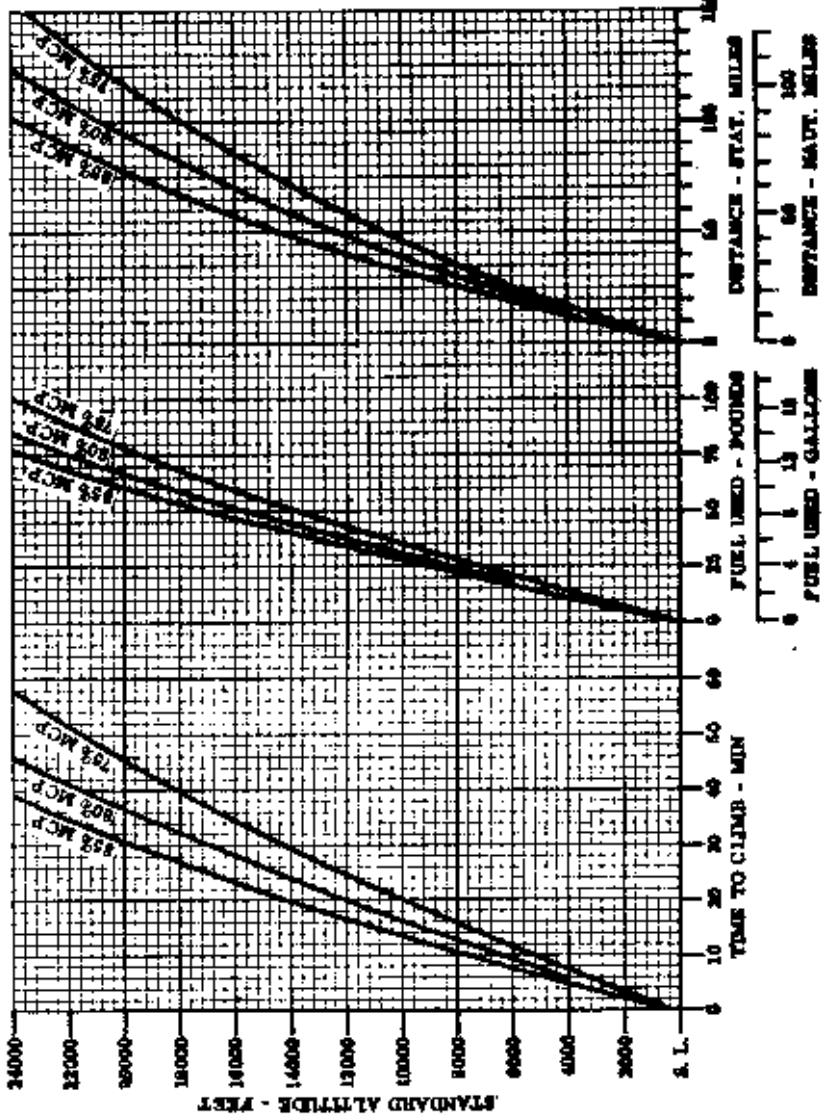


CRUISE CLIMB

TIME, FUEL AND DISTANCE

GROSS WEIGHT - 3400 LBS
CLIMB SPEED 120 MPH (IAS)

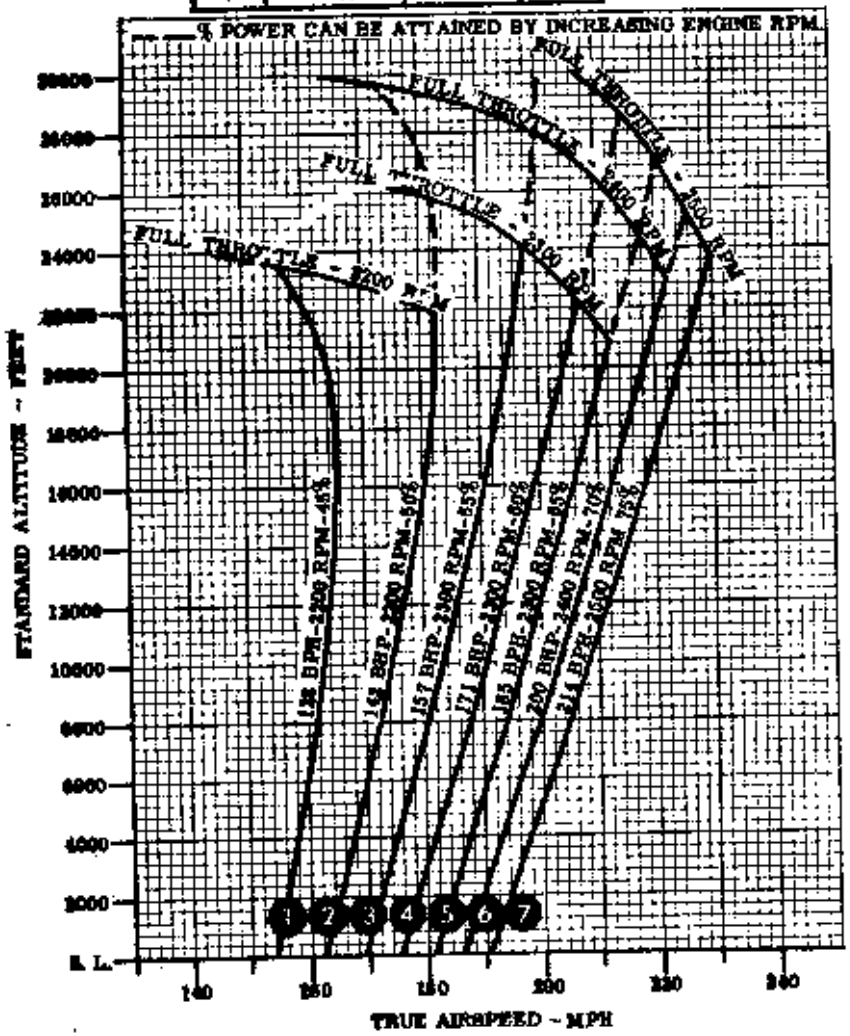
% MCP	MP	RPM	FUEL FLOW
75	24.5	2500	12.7
65	26.0	2400	11.6
55	27.0	2300	10.5



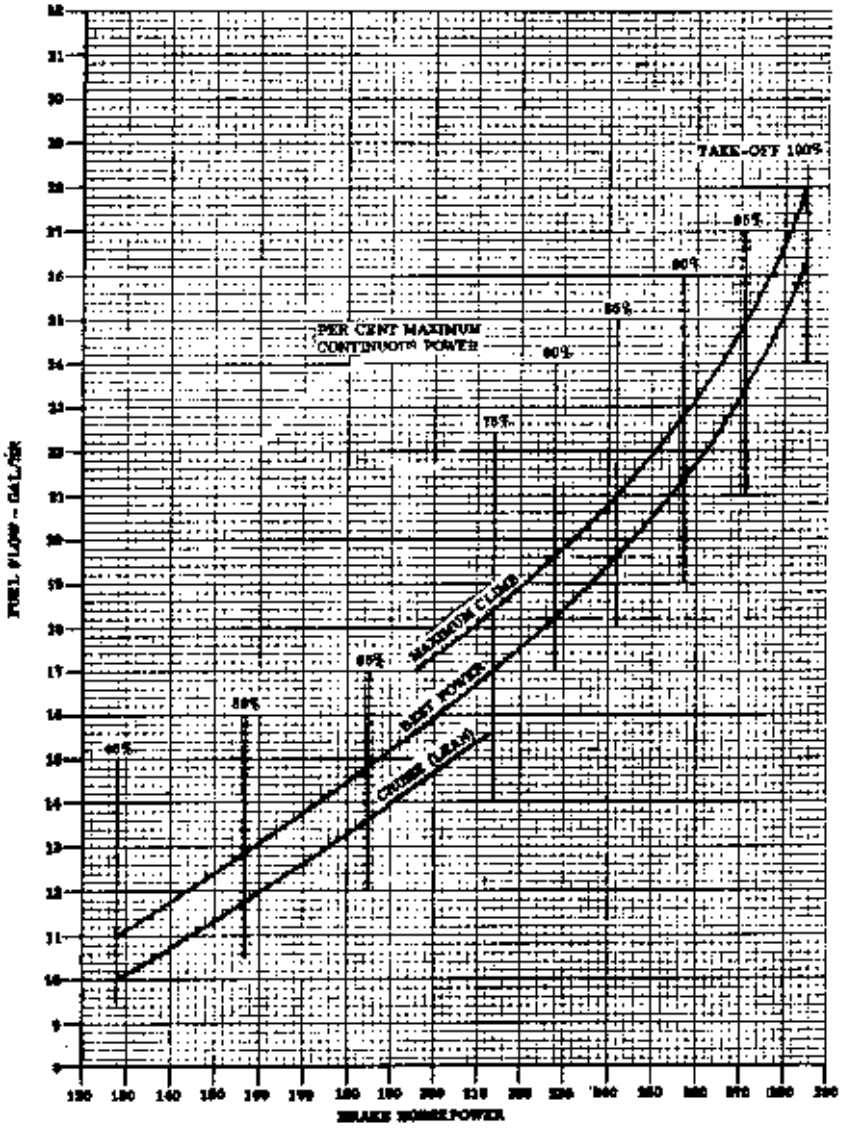
CRUISE OPERATION

GROSS WEIGHT - 3400 LBS

NO.	% POWER	ENGINE SPEED	BHP
1	45	2200	128
2	50	2200	142
3	55	2300	157
4	60	2300	171
5	65	2300	185
6	70	2400	200
7	75	2500	214



FUEL CONSUMPTION VS BRAKE HORSEPOWER



SEA LEVEL

HORSEPOWER SETTING - TSIO 520-D

2,000 FEET

MP AT 2500 RPM	MP AT 2300 RPM	MP AT 2200 RPM	OAT °F	% BHP	BHP	FUEL FLOW GAL/HR	MP AT 2500 RPM	MP AT 2300 RPM	MP AT 2200 RPM
24.3	-	-	-20	75	214	15.7	23.4	25.5	-
21.8	23.8	25.0		65	185	13.7	20.8	22.6	23.8
19.4	21.0	22.1		55	157	11.8	18.3	19.7	20.7
17.0	18.2	19.1		45	128	10.0	15.9	17.1	17.8
24.9	-	-	0	75	214	15.7	24.1	26.4	-
22.3	24.3	25.6		65	185	13.7	21.4	23.3	24.5
19.9	21.5	22.7		55	157	11.8	18.8	20.2	21.3
17.3	18.6	19.5		45	128	10.0	16.2	17.8	18.4
25.6	-	-	+20	75	214	15.7	24.8	-	-
22.9	24.8	26.2		65	185	13.7	21.9	23.9	25.2
20.3	22.0	23.2		55	157	11.8	19.2	20.7	21.8
17.6	19.0	19.9		45	128	10.0	16.4	17.6	18.4
26.3	-	-	+40	75	214	15.7	25.5	-	-
23.5	25.6	-		65	185	13.7	22.5	24.6	25.9
20.8	22.6	23.8		55	157	11.8	19.7	21.3	22.5
18.1	19.5	20.4		45	128	10.0	16.8	18.1	18.9
26.9	-	-	+60	75	214	15.7	26.1	-	-
24.1	26.3	-		65	185	13.7	23.1	25.2	26.5
21.3	23.2	24.4		55	157	11.8	20.2	21.9	23.1
18.5	20.0	20.9		45	128	10.0	17.2	18.5	19.4
27.7	-	-	+80	75	214	15.7	27.0	-	-
24.7	27.1	-		65	185	13.7	23.9	26.1	-
21.9	23.9	25.1		55	157	11.8	20.8	22.6	23.8
18.9	20.5	21.5		45	128	10.0	17.7	19.1	19.8
28.4	-	-	+100	75	214	15.7	27.9	-	-
25.3	27.8	-		65	185	13.7	24.6	26.9	-
22.4	24.5	25.8		55	157	11.8	21.4	23.2	24.5
19.3	20.9	22.0		45	128	10.0	18.2	19.6	20.6

4000 FEET

HORSEPOWER SETTING - TSIO 520-D

6,000 FEET

MP AT 25000 RPM	MP AT 2300 RPM	MP AT 2200 RPM	OAT °F	% BHP	BHP	FUEL FLOW GAL/HR	MP AT 2500 RPM	MP AT 2300 RP	MP AT 2200 RPM
23.0	25.1	26.5	-20	75	214	15.7	23.0	25.2	26.5
20.3	22.0	23.2		65	185	13.7	20.2	21.9	23.1
17.9	19.3	20.2		55	157	11.8	17.9	19.3	20.3
15.2	16.2	17.0		45	128	10.0	15.7	16.8	17.6
23.7	25.9	-	0	75	214	15.7	23.7	26.0	-
20.9	22.7	23.9		65	185	13.7	20.8	22.6	23.9
18.3	19.8	20.8		55	157	11.8	18.3	19.8	20.9
15.6	16.7	17.5		45	128	10.0	16.1	17.2	18.1
24.4	26.6	-	+20	75	214	15.7	24.5	-	-
21.4	23.3	24.5		65	185	13.7	21.4	23.3	24.7
18.7	20.3	21.3		55	157	11.8	18.8	20.3	21.4
15.9	17.1	18.0		45	128	10.0	16.5	17.7	18.6
25.2	-	-	+40	75	214	15.7	25.3	-	-
22.1	24.1	25.3		65	185	13.7	22.0	24.0	25.4
19.3	20.9	22.0		55	157	11.8	19.3	20.8	21.9
16.4	17.7	18.5		45	128	10.0	16.9	18.2	19.1
26.0	-	-	+60	75	214	15.7	26.2	-	-
22.7	24.8	26.1		65	185	13.7	22.8	24.9	26.3
19.8	21.5	22.6		55	157	11.8	19.9	21.5	22.6
16.9	18.2	19.0		45	128	10.0	17.3	18.6	19.5
26.8	-	-	+80	75	214	15.7	27.1	-	-
23.5	25.6	26.8		65	185	13.7	23.6	25.7	-
20.4	22.1	23.3		55	157	11.8	20.5	22.2	23.3
17.3	18.6	19.5		45	128	10.0	17.6	19.0	19.9
27.6	-	-	+100	75	214	15.7	27.9	-	-
24.3	26.5	-		65	185	13.7	24.3	26.5	-
20.9	22.7	23.9		55	157	11.8	21.0	22.8	24.0
17.7	19.0	20.0		45	128	10.0	17.9	19.3	20.3

HORSEPOWER SETTING - TSIO 520-D

10,000 FEET — 15,000 FEET

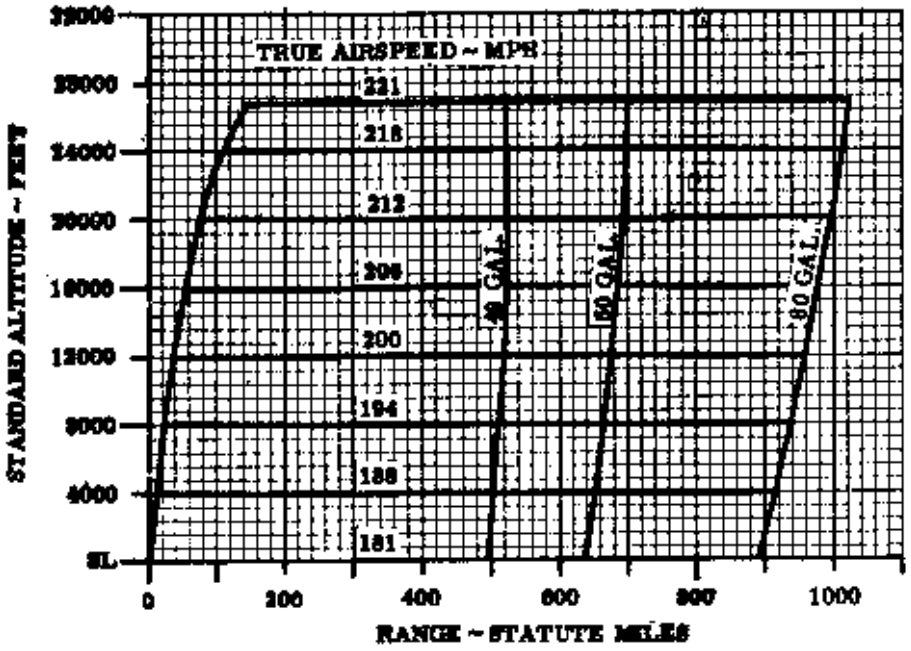
MP AT 2500 RPM	MP AT 2300 RPM	MP AT 2200 RPM	OAT °F	% BHP	BHP	FUEL FLOW GAL/HR	MP AT 2500 RPM	MP AT 2300 RPM	MP AT 2200 RPM
22.9	25.0	26.4	-40	75	214	15.7	23.0	25.1	26.5
20.1	21.8	22.9		65	185	13.7	20.2	22.0	23.1
17.8	19.2	20.1		55	157	11.8	17.9	19.3	20.3
15.7	16.8	17.6		45	128	10.0	15.7	16.8	17.6
23.6	25.8	-	-20	75	214	15.7	23.8	25.9	-
20.7	22.5	23.7		65	185	13.7	20.7	22.6	23.8
18.2	19.7	20.6		55	157	11.8	18.3	19.7	20.8
16.1	17.2	18.1		45	128	10.0	16.0	17.2	18.0
24.3	26.5	-	0	75	214	15.7	24.5	-	-
21.3	23.2	24.4		65	185	13.7	21.3	23.2	24.5
18.6	20.2	21.1		55	157	11.8	18.7	20.2	21.3
16.5	17.6	18.5		45	128	10.0	16.4	17.7	18.5
25.0	-	-	+20	75	214	15.7	25.2	-	-
21.9	23.8	25.1		65	185	13.7	21.9	23.9	25.2
19.0	20.6	21.6		55	157	11.8	19.2	20.7	21.8
16.8	18.0	18.9		45	128	10.0	16.8	18.2	19.0
25.9	-	-	+40	75	214	15.7	26.0	-	-
22.7	24.7	26.0		65	185	13.7	22.6	24.7	-
19.6	21.3	22.3		55	157	11.8	19.7	21.3	22.5
17.2	18.5	19.4		45	128	10.0	17.1	18.6	19.5
26.8	-	-	+60	75	214	15.7	26.9	-	-
23.4	22.0	23.0		65	185	13.7	23.4	25.6	-
20.2	22.0	23.0		55	157	11.8	20.3	22.0	-
17.6	18.9	19.9		45	128	10.0	17.5	19.0	19.9
27.7	-	-	+80	75	214	15.7	27.8	-	-
24.1	26.4	-		65	185	13.7	24.2	-	-
20.8	22.6	23.8		55	157	11.8	20.9	22.7	-
17.9	19.3	20.3		45	128	10.0	17.9	19.3	-

HORSEPOWER SETTING - TSIO 520-D

20,000 FEET — 25,000 FEET

MP AT 2500 RPM	MP AT 2300 RPM	MP AT 2200 RPM	OAT °F	% BHP	BHP	FUEL FLOW GAL/HR	MP AT 2500 RPM	MP AT 2300 RPM	MP AT 2200 RPM
22.9	25.0	26.3	-80	75	214	15.7	24.9	-	-
20.2	22.0	23.1		65	185	13.7	20.6	-	-
17.7	19.2	20.1		55	157	11.8	18.2	20.4	-
15.1	16.2	16.9		45	128	10.0	15.3	16.4	-
23.4	25.6	-	-60	75	214	15.7	25.9	-	-
20.6	22.5	23.6		65	185	13.7	21.6	-	-
18.0	19.5	20.5		55	157	11.8	18.6	21.3	-
15.4	16.5	17.2		45	128	10.0	15.7	16.9	-
23.9	26.2	-	-40	75	214	15.7	-	-	-
21.1	23.0	24.1		65	185	13.7	22.7	-	-
18.4	19.9	20.9		55	157	11.8	19.1	-	-
15.7	16.8	17.6		45	128	10.0	16.2	17.4	-
25.1	-	-	-20	75	214	15.7	-	-	-
22.0	23.9	-		65	185	13.7	-	-	-
19.1	20.6	21.7		55	157	11.8	19.6	-	-
16.3	17.5	18.3		45	128	10.0	16.7	-	-
26.0	-	-	0	75	214	15.7	-	-	-
22.7	-	-		65	185	13.7	-	-	-
19.7	21.3	-		55	157	11.8	-	-	-
16.7	18.0	-		45	128	10.0	17.2	-	-
-	-	-	+20	75	214	15.7	-	-	-
23.4	-	-		65	185	13.7	-	-	-
20.3	-	-		55	157	11.8	-	-	-
17.1	-	-		45	128	10.0	-	-	-
-	-	-	+40	75	214	15.7	-	-	-
-	-	-		65	185	13.7	-	-	-
-	-	-		55	157	11.8	-	-	-
17.6	-	-		45	128	10.0	-	-	-

RANGE – 65% MAXIMUM CONTINUOUS POWER



ASSOCIATED CONDITIONS:

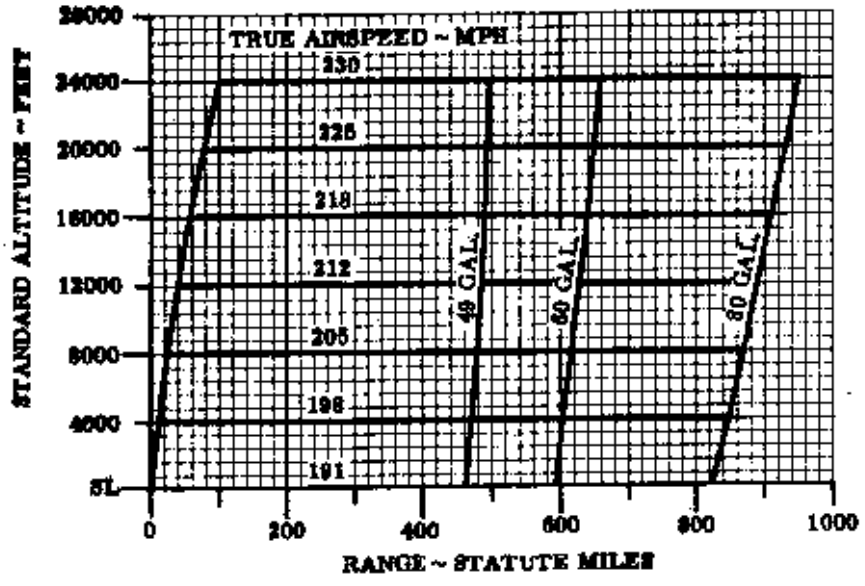
CLIMB	2500 RPM @
POWER	28.0 IN HG
WEIGHT	3400 LBS
FUEL CONSUMPTION	13.7 GPH

NOTE

RANGE INCLUDES START, TAXI AND CLIMB WITH 45 MIN RESERVE AT 45% MAXIMUM CONTINUOUS POWER

Turbo-Bonanza V35B-TC

RANGE – 75% MAXIMUM CONTINUOUS POWER



ASSOCIATED CONDITIONS:

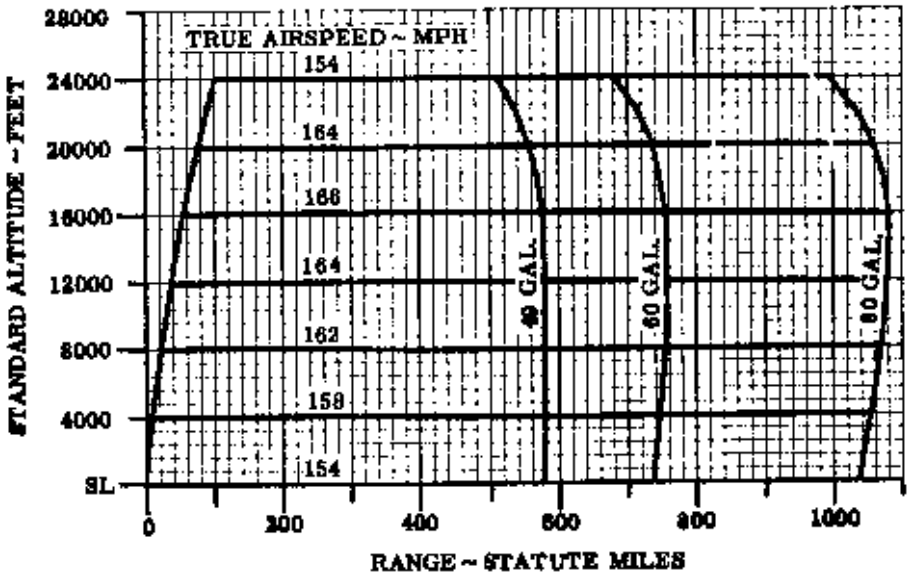
CLIMB	2500 RPM@
POWER	28.0 IN HG
WEIGHT	3400 LBS
FUEL CONSUMPTION	15.7 GPH

NOTE

RANGE INCLUDES START, TAXI AND CLIMB WITH 45 MIN RESERVE AT 45% MAXIMUM CONTINUOUS POWER

Turbo-Bonanza V35B-TC

RANGE — 45% MAXIMUM CONTINUOUS POWER



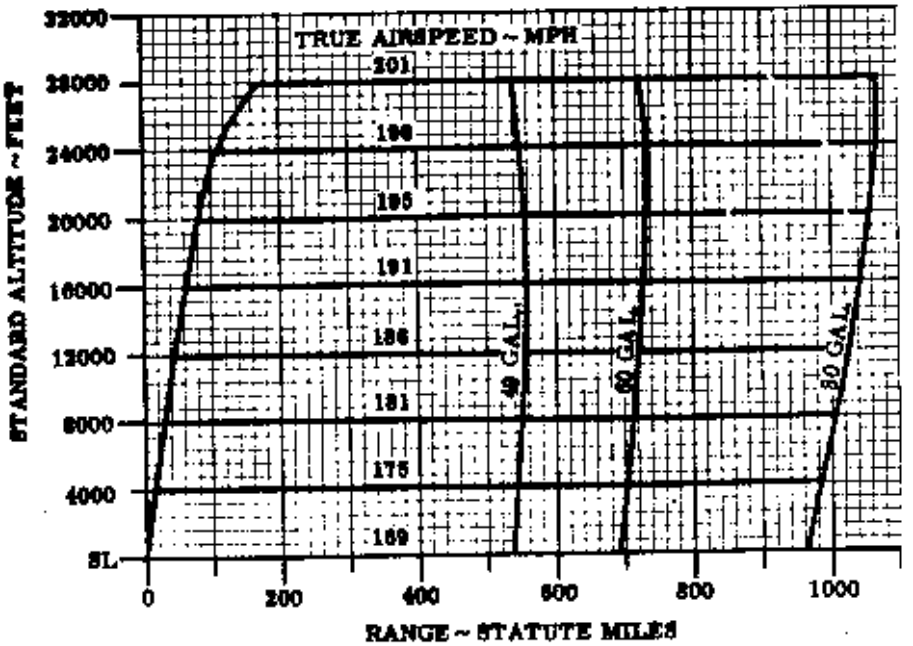
ASSOCIATED CONDITIONS:

CLIMB	2500 RPM@
POWER	28.0 IN HG
WEIGHT	3400 LBS
FUEL CONSUMPTION	10.0 GPH

NOTE

RANGE INCLUDES START, TAXI AND CLIMB WITH 45 MIN RESERVE AT 45% MAXIMUM CONTINUOUS POWER

RANGE — 55% MAXIMUM CONTINUOUS POWER



ASSOCIATED CONDITIONS:

CLIMB	2500 RPM@
POWER	28.0 IN HG
WEIGHT	3400 LBS
FUEL CONSUMPTION	11.8 GPH

NOTE

RANGE INCLUDES START, TAXI AND CLIMB WITH 45 MIN RESERVE AT 45% MAXIMUM CONTINUOUS POWER

NORMAL LANDING

ASSOCIATED CONDITIONS:

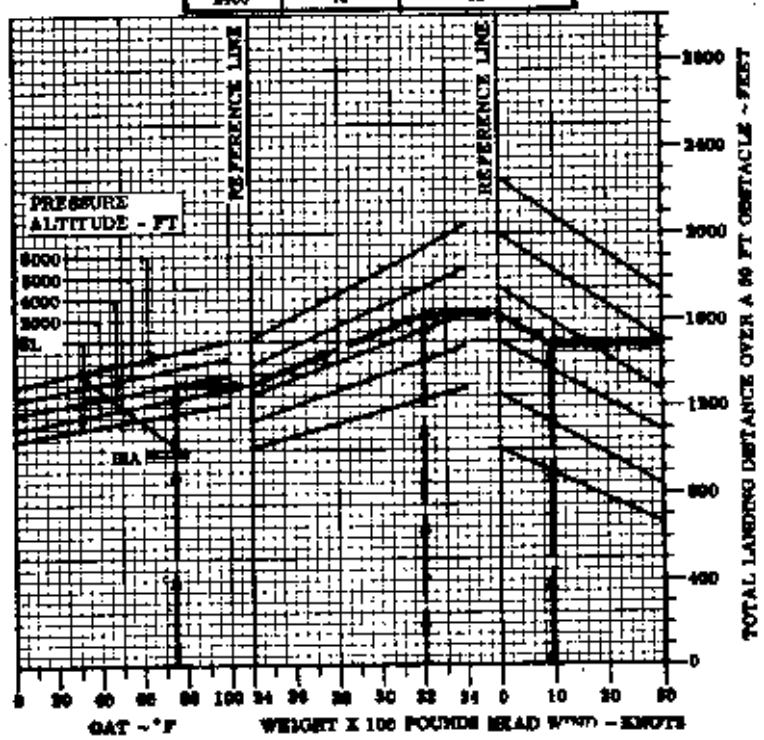
POWER	AS REQUIRED TO MAINTAIN 800 FT/MIN DESCENT ON APPROACH
FLAPS	DOWN
RUNWAY	PAVED, LEVEL, DRY SURFACE
APPROACH SPEED	IAS AS TABULATED

NOTE: GROUND ROLL IS APPROX. 53% OF TOTAL LANDING DISTANCE OVER A 50 FT OBSTACLE.

EXAMPLE:

OAT	75°F
PRESSURE ALTITUDE	4000 FT
LANDING WEIGHT	3200 LBS
HEAD WIND	10 KNOTS
TOTAL LANDING DISTANCE OVER A 50 FT OBSTACLE	1475 FT
GROUND ROLL (53% OF 1475)	782 FT
IAS APPROACH SPEED	87 MPH IAS

WEIGHT POUNDS	IAS APPROACH SPEED (ASSUMES ZERO INSTR. ERROR)	
	MPH	KNOTS
3400	90	78
3200	87	76
3000	84	73
2800	81	70
2600	78	68
2400	75	65



OBSTACLE LANDING

ASSOCIATED CONDITIONS:

POWER	AS REQUIRED TO MAINTAIN 800 FT/MIN DESCENT ON APPROACH
FLAPS	DOWN
GEAR	DOWN
RUNWAY	PAVED, LEVEL, DRY SURFACE
APPROACH SPEED	IAS AS TABULATED
BRAKING	MAXIMUM

NOTE: GROUND ROLL IS APPROX. 55% OF TOTAL LANDING DISTANCE OVER A 50 FT OBSTACLE.

EXAMPLE:

OAT	75°F
PRESSURE ALTITUDE	3000 FT
LANDING WEIGHT	3600 LBS
HEAD WIND	10 KNOTS
TOTAL LANDING DISTANCE OVER A 50 FT OBSTACLE	1000 FT
GROUND ROLL (55% OF 1000)	550 FT
IAS APPROACH SPEED	76 MPH

WEIGHT POUNDS	IAS APPROACH SPEED (ASSUMES ZERO INSTR. ERROR)	
	MPH	KNOTS
3400	80	76
3200	78	68
3000	76	66
2900	73	63
2600	70	61
2400	67	58