

FOXONE

NEXT GENERATION SERIES

16 YEARS ANNIVERSARY ENHANCED EDITION



CHARTS & GRAPHS MANUAL
AEROPLANE

CONTENTS

<u>LANDING PERFORMANCE</u>	<u>4</u>
<u>SPEED POWER-PERFORMANCE CRUISE</u>	<u>5</u>
<u>CLIMB PERFORMANCE</u>	<u>6</u>
<u>FLAPS UP TAKE-OFF PERFORMANCE</u>	<u>7</u>
<u>ENGINE PERFORMANCE</u>	<u>8</u>
<u>TIME, FUEL & DISTANCE TO DESCEND</u>	<u>9</u>
<u>RANGE - PERFORMANCE CRUISE</u>	<u>10</u>
<u>ENDURANCE</u>	<u>11</u>
<u>AIRSPEED CORRECTION TABLE</u>	<u>12</u>
<u>MAXIMUM RATE OF CLIMB</u>	<u>13</u>
<u>LANDING DISTANCE REQUIRED</u>	<u>14</u>
<u>TAKE-OFF DISTANCE REQUIRED</u>	<u>15</u>
<u>CRUISE PERFORMANCE</u>	<u>16</u>
<u>METEOROLOGY CHART I</u>	<u>17</u>
<u>METEOROLOGY CHART II</u>	<u>18</u>
<u>METEOROLOGY CHART III</u>	<u>19</u>
<u>STATION MODELS</u>	<u>20</u>

LANDING PERFORMANCE

DISTANCE - FEET

2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500

50 FT BARRIER REF. LINE

GROUND ROLL REF. LINE

WIND REF. LINE

WEIGHT REF. LINE

LANDING PERFORMANCE

POWER OFF APPROACH, 40° FLAPS
65 KIAS APPROACH SPEED
FULL STALL TOUCHDOWN
MAXIMUM BRAKING,
PAVED, LEVEL DRY RUNWAY

TAILWIND

HEADWIND

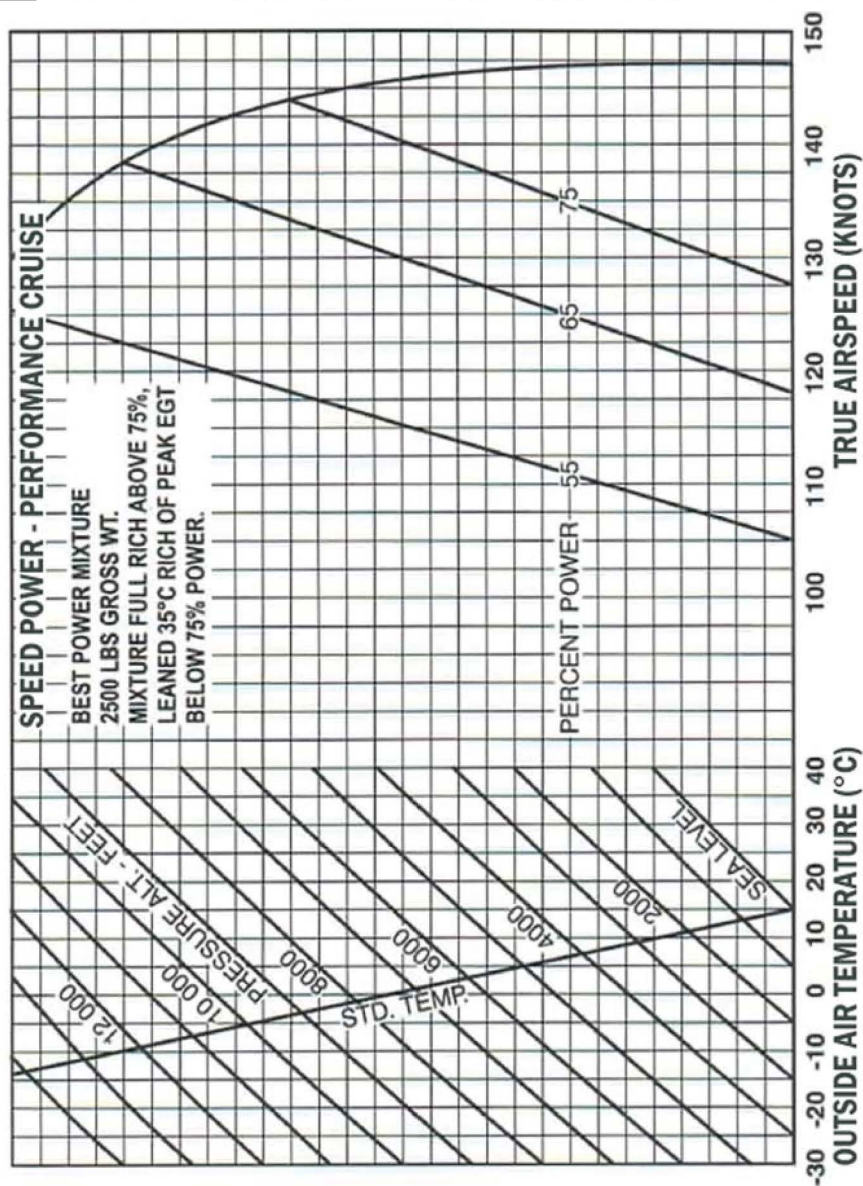
WIND (KTS)

WEIGHT (LBS)

OUTSIDE AIR TEMPERATURE (°C)

PRESSURE ALT. - FT.
-6000
-4000
-2000
STD. TEMP.
SEA LEVEL

SPEED POWER - PERFORMANCE CRUISE



CLIMB PERFORMANCE

CLIMB PERFORMANCE

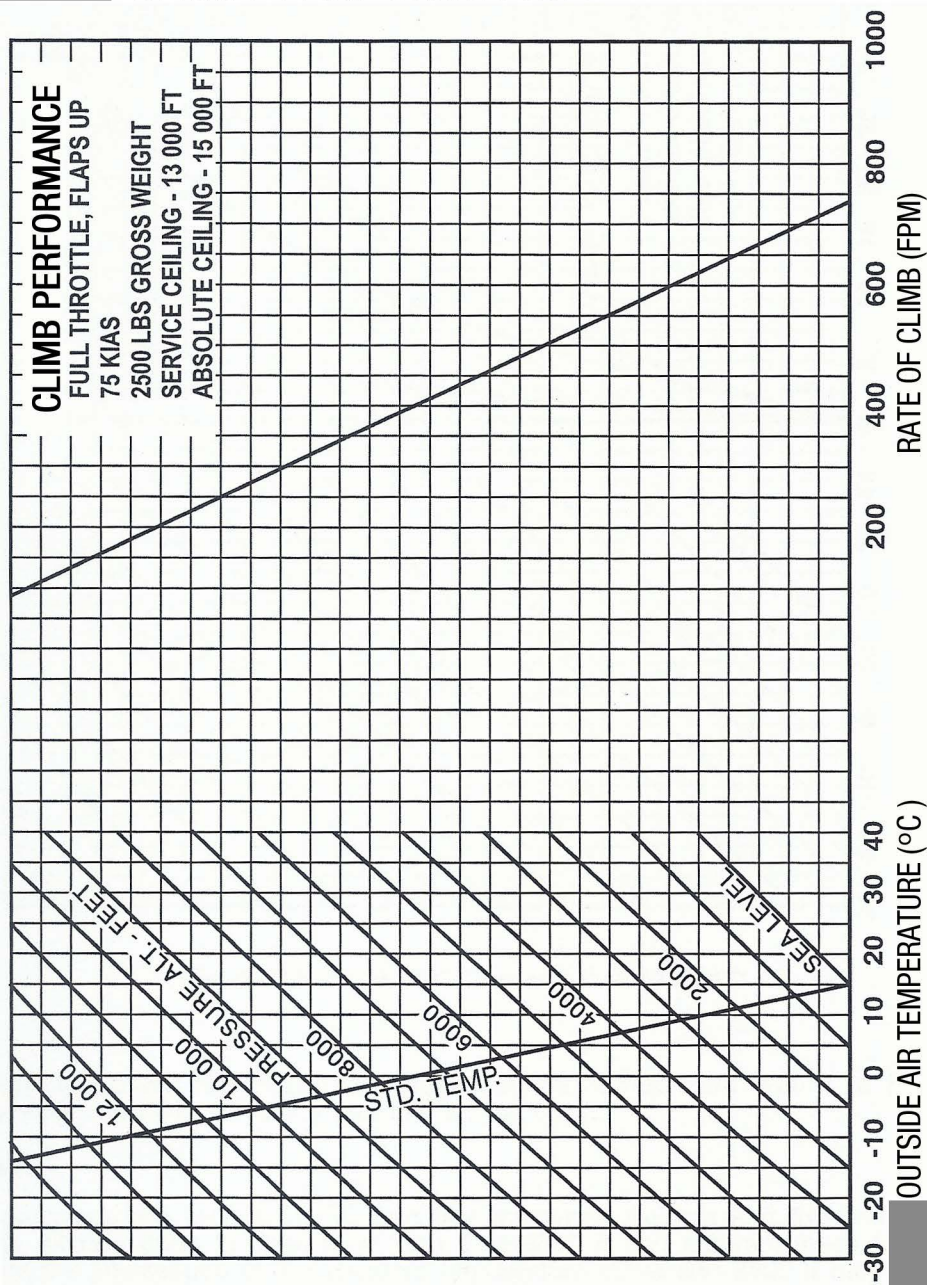
FULL THROTTLE, FLAPS UP

75 KIAS

2500 LBS GROSS WEIGHT

SERVICE CEILING - 13 000 FT

ABSOLUTE CEILING - 15 000 FT



FLAPS UP TAKE-OFF PERFORMANCE

DISTANCE - FEET

3400
3200
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400

50 FT BARRIER REF. LINE

GROUND ROLL REF. LINE

WIND REF. LINE

WEIGHT REF. LINE

FLAPS UP TAKE-OFF PERFORMANCE

FULL THROTTLE BEFORE BRAKE RELEASE
PAVED LEVEL DRY RUNWAY

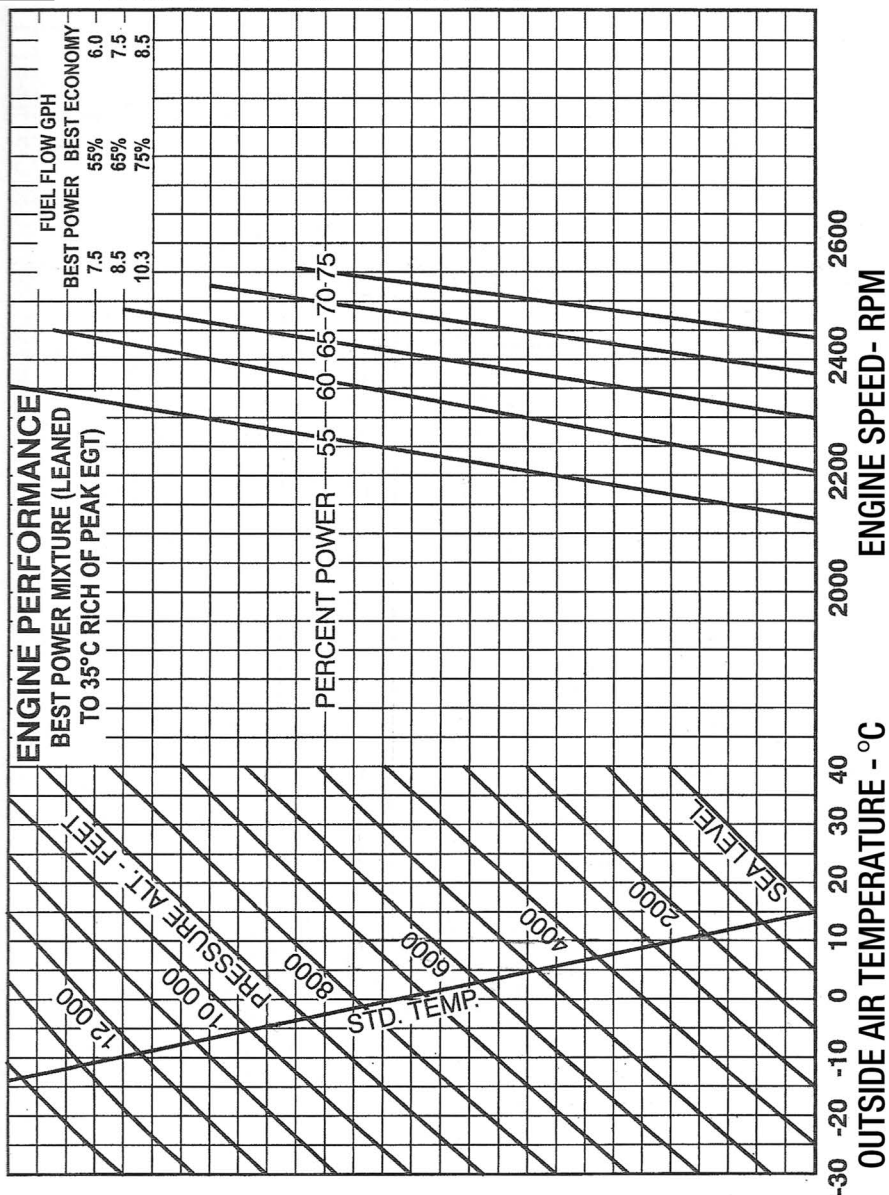
WEIGHT LBS.	TAKE-OFF SPEEDS KIAS	LIFT OFF	50 FT
2500	52	60	
2400	50	58	
2300	48	56	
2200	46	54	
2000	45	52	

WIND (KTS)

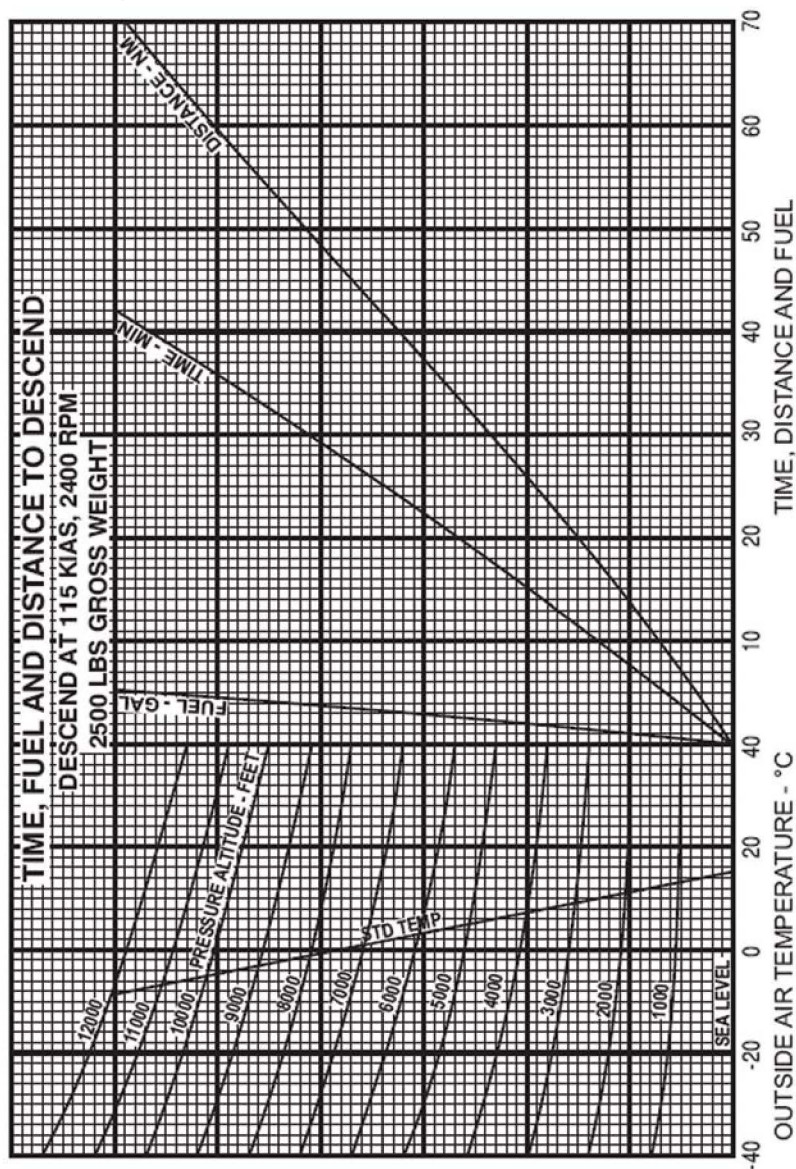
WEIGHT (LBS)

OUTSIDE AIR TEMPERATURE (°C)

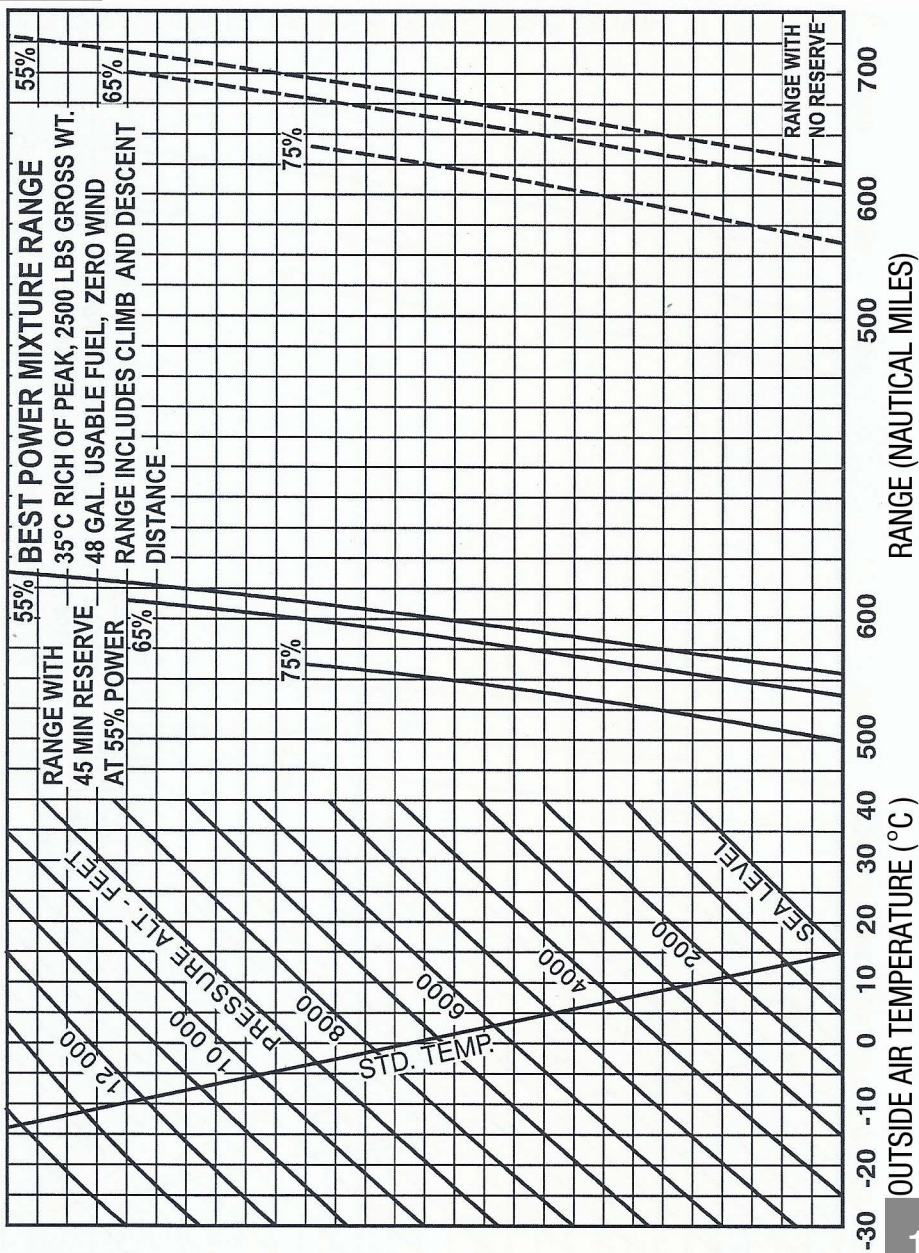
ENGINE PERFORMANCE



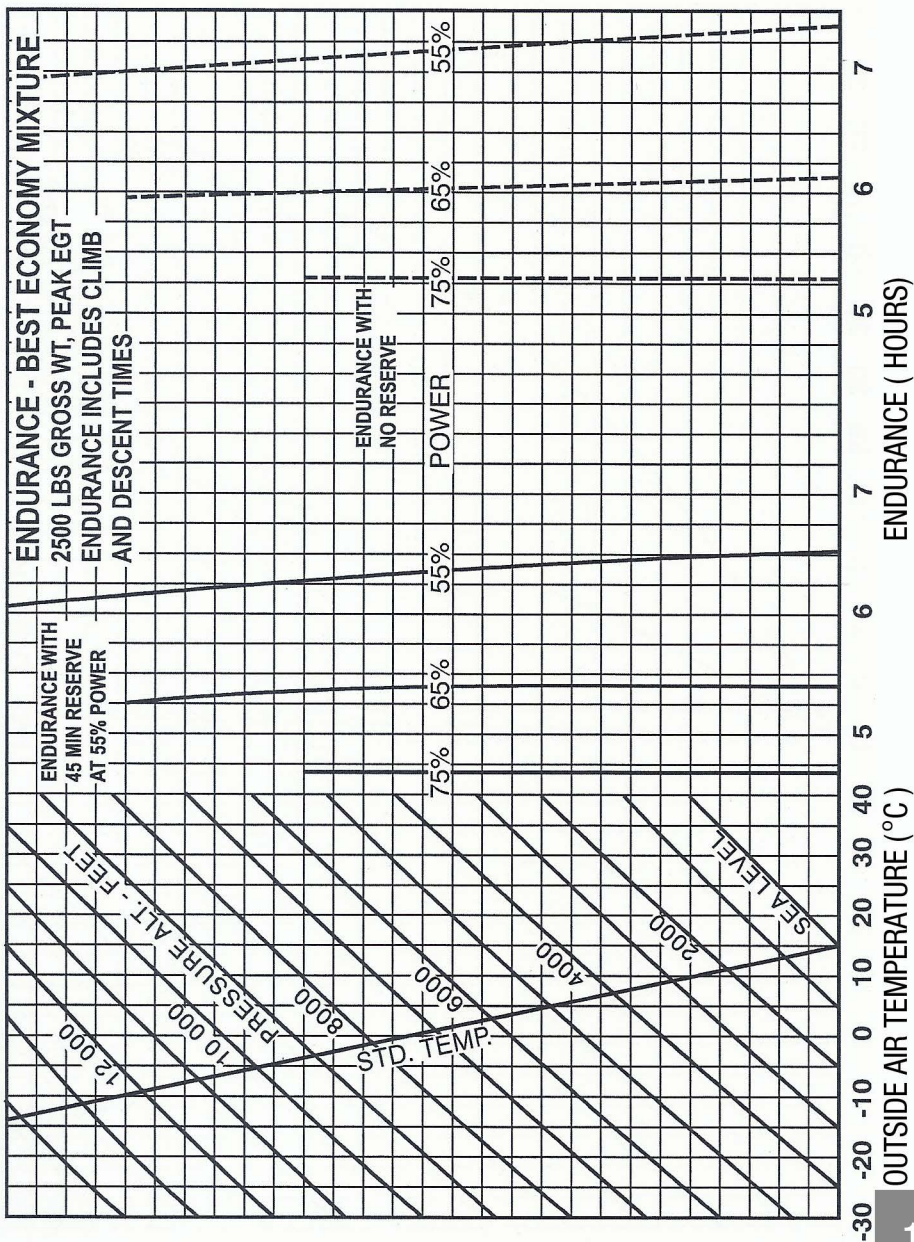
TIME, FUEL & DISTANCE TO DESCEND



RANGE - PERFORMANCE CRUISE



ENDURANCE



AIRSPEED CORRECTION TABLE

AIRSPEED CORRECTION TABLE														
	KIAS	50	60	70	80	90	100	110	120	130	140	150		
FLAPS UP	KCAS	62	66	75	83	92	102	108	118	129	139	148		
FLAPS 10°	KCAS	58	64	73	81	91	102	107	118	129	---	---		
FLAPS 40°	KCAS	56	62	71	79	89	103	111	---	---	---	---		

MAXIMUM RATE OF CLIMB

MAXIMUM RATE OF CLIMB									
WEIGHT (LBS)	PRESS ALT (FT)	CLIMB SPEED KIAS	RATE OF CLIMB - FPM						
			-20°C	-10°C	0°C	10°C	20°C	30°C	40°C
2300	SL	70	650	630	610	570	520	480	430
	2000	70	630	610	580	530	480	420	360
	4000	69	590	560	530	490	440	390	320
	6000	69	550	520	490	450	400	350	300
	8000	68	510	480	450	410	350	310	270
	10,000	67	460	410	360	300	250	---	---
	12,000	66	390	340	280	220	---	---	---

CONDITION: , FULL THROTTLE, FLAPS UP AND MIXTURE LEANED FOR MAXIMUM RPM DURING CLIMB

LANDING DISTANCE REQUIRED

LANDING DISTANCE REQUIRED												
CONDITIONS:			NOTES:									
Flaps 40°			Decrease all distances by 10% for each 10 knots of headwind.									
Power off			Increase all distances by 10% for each 10 knots of tailwind.									
Maximum braking			For operation on a dry, grass runway increase all distances by 25% of the "Ground Roll" figure.									
Paved, level, dry runway												
Zero wind												
WEIGHT LBS	KIAS AT 50 FT	PRESSURE ALTITUDE FEET	0°C		10°C		20°C		30°C		40°C	
			GND ROLL	TOTAL TO CLEAR 50 FT	GND ROLL	TOTAL TO CLEAR 50 FT	GND ROLL	TOTAL TO CLEAR 50 FT	GND ROLL	TOTAL TO CLEAR 50 FT	GND ROLL	TOTAL TO CLEAR 50 FT
2400	65	SEA LEVEL	500	1220	515	1250	535	1280	550	1310	570	1345
		1000	515	1250	535	1280	555	1315	570	1345	590	1380
		2000	535	1280	555	1315	575	1350	595	1385	615	1420
		3000	555	1315	575	1350	595	1385	615	1420	635	1455
		4000	575	1350	595	1385	620	1425	640	1460	660	1495
		5000	595	1385	620	1440	640	1465	660	1500	685	1540
		6000	620	1440	645	1470	705	1505	690	1550	710	1625
		7000	645	1480	665	1510	730	1550	715	1590	735	1670
	8000	670	1525	695	1555	755	1595	740	1635	765	1720	

TAKE-OFF DISTANCE REQUIRED

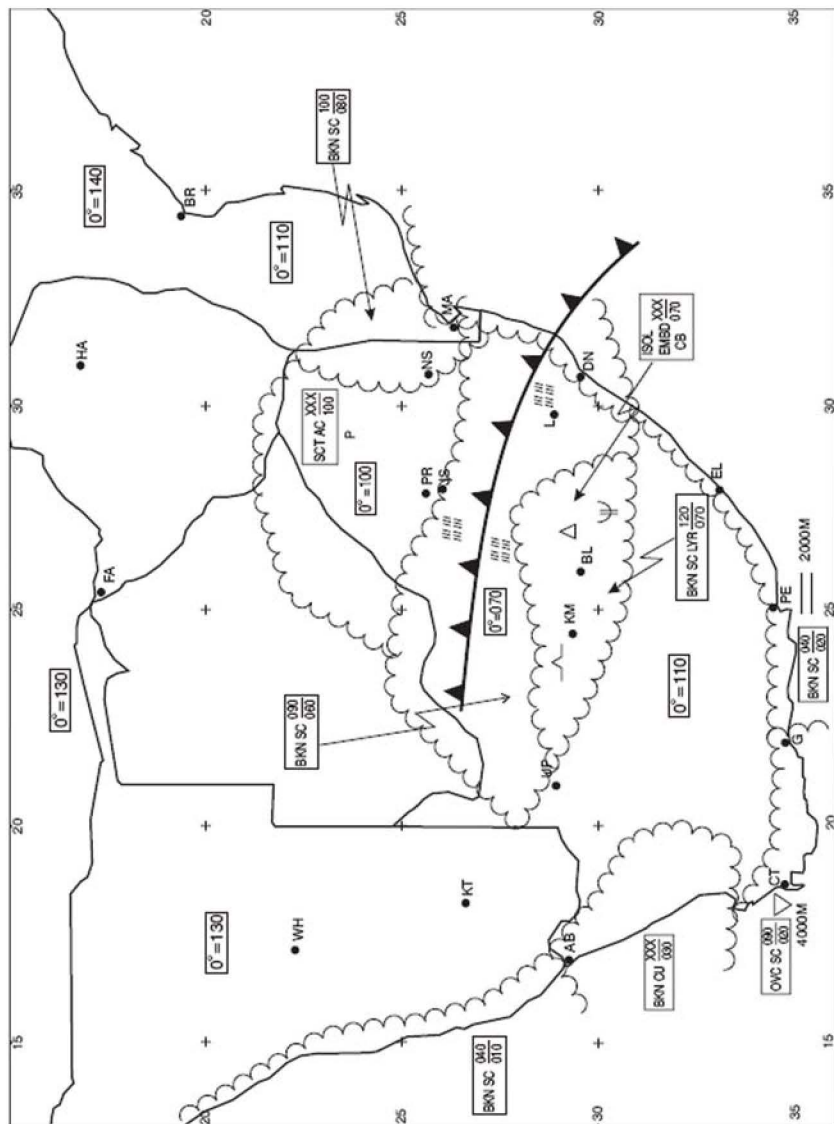
TAKE-OFF DISTANCE REQUIRED											
PAVED, LEVEL, DRY RUNWAY, ZERO WIND, FLAPS UP											
WEIGHT (LBS)	TAKE-OFF SPEED (KIAS)		PRESSURE ALTITUDE (FT)	0°C		10°C		20°C		30°C	
				TOTAL TO CLEAR 50 FT		TOTAL TO CLEAR 50 FT		TOTAL TO CLEAR 50 FT		TOTAL TO CLEAR 50 FT	
	LIFT OFF	AT 50 FT		GND RUN	GND RUN	GND RUN	GND RUN	GND RUN	GND RUN	GND RUN	GND RUN
2300	60	65	SEA LEVEL	860	900	1580	960	1670	1040	1770	---
			1000	920	970	1670	1030	1750	1100	1860	---
			2000	1010	1070	1800	1140	1940	1220	2060	---
			3000	1120	1190	1950	1270	2040	1360	2270	---
			4000	1280	1360	2100	1450	2230	1550	2490	---
			5000	1420	1510	2330	1610	2470	1770	2720	---
			6000	1580	1680	2560	1790	2710	1910	2960	---
			7000	1760	1870	2830	1990	2990	2120	3210	---
			8000	1980	2100	3180	2230	3350	---	---	---

NOTES:

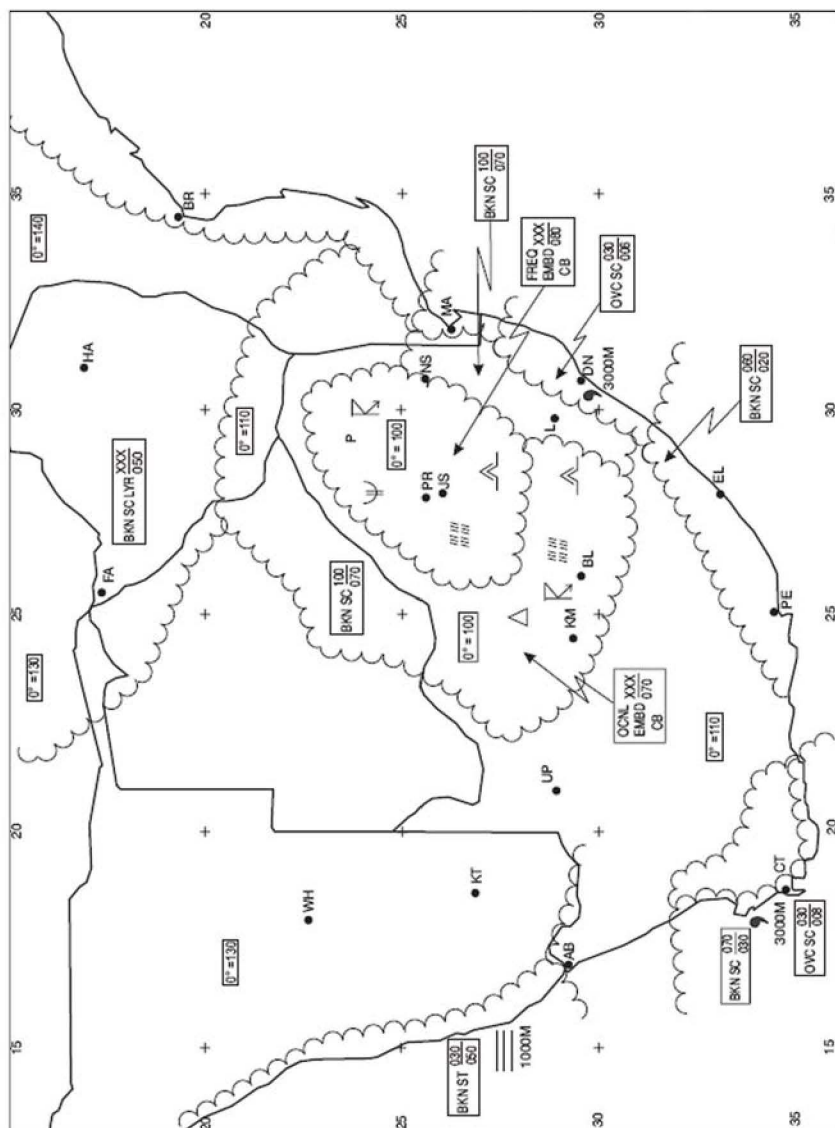
- For operation on a dry, grass runway, increase both distances, (i.e. "ground run" and "total to clear 50ft obstacle") by 5% of the "total to clear 50 ft obstacle figure".
- Reduce take-off distances by 10% for each 10 kts headwind.
- Increase take-off distances by 10% for each 5 kts tailwind, maximum tailwind component 10 kts.

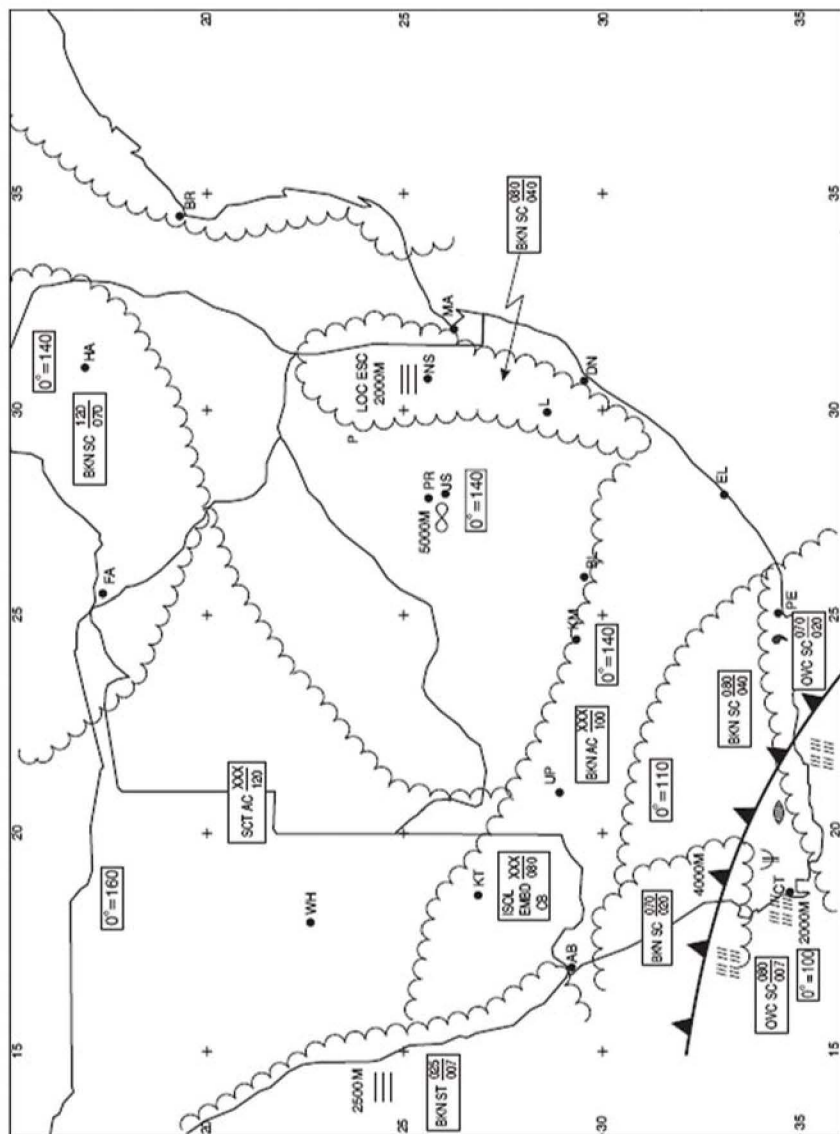
CRUISE PERFORMANCE

CRUISE PERFORMANCE									
GROSS WEIGHT 2300 lbs, MIXTURE LEANED FOR CRUISE, ZERO WIND									
PRESSURE ALTITUDE	RPM	TEMPERATURE °C							
		ISA - 20°			ISA			ISA +20°	
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS
2000	2600	87	120	9.8	82	118	9.5	78	118
	2500	82	117	9.2	77	117	9.1	74	116
	2400	76	113	8.6	70	113	8.4	68	111
	2300	69	108	8.0	64	107	7.8	61	104
	2200	60	102	7.4	58	100	7.2	55	98
4000	2600	85	120	9.8	82	118	9.5	78	118
	2500	80	116	8.9	75	113	8.7	71	112
	2400	73	112	8.3	68	108	8.1	65	106
	2300	66	106	7.7	62	102	7.6	61	100
	2200	58	100	7.2	56	95	7.0	54	93
6000	2600	81	118	9.3	78	116	9.1	75	116
	2500	74	113	8.7	71	110	8.4	69	110
	2400	67	108	8.1	65	104	7.9	62	103
	2300	61	102	7.6	59	100	7.5	56	99
	2200	55	96	7.2	53	94	7.1	51	93



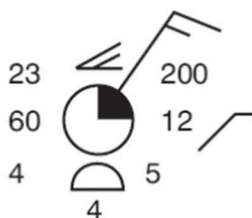
METEOROLOGY CHART II



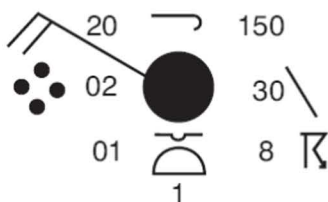


STATION MODELS

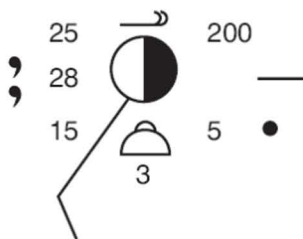
STATION 4



STATION 5



STATION 6



**Thank you for using FOXONE
Good luck with your exams**



**For more information, support and
updates, please visit our website:
www.foxone.co.za**

