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# INTRODUCTION

The following information is considered the most accurate and practical guidance material available for wet and adverse runway operations. This advisory information is not FAA approved. The information is based on JAR 25X1591 and airplane certification basis. The impingement drag is based on testing performed on a similar Cessna Citation.

# DATA FOR WET, SLUSH, SNOW AND ICE COVERED RUNWAYS

## PERFORMANCE

The takeoff field length and landing distance tables presented in Section IV are based on paved, dry, runway. For takeoffs and landings on precipitation covered runways, use the following tables and correction factors. The performance data presented are based on weights up to the following weights.

Takeoff Weight .....	12,375 Pounds
Landing Weight .....	11,500 Pounds

## WARNING

**THESE DISTANCES AND CORRECTIONS FACTORS FOR WET AND ADVERSE RUNWAY CONDITIONS ARE APPROXIMATE AND ARE TO BE CONSIDERED MINIMUMS, AS ACTUAL RUNWAY CONDITIONS MAY REQUIRE DISTANCES GREATER THAN THOSE DETERMINED.**

## DEFINITIONS

Runway Contaminated by Compacted Snow:

A runway is considered contaminated by compacted snow when covered by snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up.

Runway Contaminated by Standing Water, Slush or Loose Snow:

A runway is considered to be contaminated when more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used, is covered by surface water, more than 3mm (0.125 inch) deep, or by slush, or loose snow, equivalent to more than 3mm (0.125 inch) of water.

Runway Contaminated by Wet Ice:

A runway surface condition where braking action is expected to be very low, due to the presence of wet ice.

Wet Runway:

A runway is considered wet when there is sufficient moisture on the surface to appear reflective, but without significant areas of standing water.

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**DEFINITIONS** (Continued)**Takeoff Field Length:  
(Wet and Contaminated)**

The takeoff field length given for each combination of gross weight, ambient temperature, altitude, wind and runway gradients is the greatest of the following:

- a. 115 percent of the two-engine horizontal takeoff distance from start to a height of 35 feet above runway surface.
- b. Accelerate-stop distance.
- c. The engine-out accelerate-go distance to 15 feet.
- d. The Dry Takeoff Field Length.

No specific identification is made on the charts as to which of these distances governs a specific case.

**WET RUNWAY TAKEOFF PERFORMANCE**

Determine the dry runway takeoff field length as described in Procedures for Use of Takeoff Performance Tables in Section IV of the basic FAA Approved Airplane Flight Manual. Using the same procedures, determine the wet runway takeoff field length,  $V_1$ ,  $V_R$ ,  $V_2$ , and  $V_{ENR}$  from the following figures. If the runway has a gradient, the takeoff field length and  $V_1$  must be adjusted in accordance with the following figures:

	<u>LEVEL RUNWAY</u>	<u>RUNWAY GRADIENT ADJUSTMENT</u>
Flaps UP, anti-ice OFF	Figure 7-2	Figure 7-1
Flaps UP, anti-ice ON	Figure 7-4	Figure 7-3
Flaps 15°, anti-ice OFF	Figure 7-6	Figure 7-5
Flaps 15°, anti-ice ON	Figure 7-8	Figure 7-7

The takeoff field length is the longer of the wet or dry takeoff field lengths. Use the speeds determined from the wet runway performance.

**EXAMPLE FOR TAKEOFF WITH FLAPS UP:**

Pressure Altitude = 2000 FEET	Runway Gradient = ZERO (level)
Gross Weight = 12,000 POUNDS	Anti-Ice Systems = OFF
Ambient Temperature = 10°C	Runway Condition = WET
Wind = 10 KNOTS (HEADWIND)	

From Figure 4-19, the Takeoff Field Length is 3740 FEET (dry runway, anti-ice systems off).

From Figure 7-2, the Takeoff Field Length is 4050 FEET (wet runway, anti-ice systems off).  $V_1 = 97$  KNOTS,  $V_R = 116$  KNOTS,  $V_2 = 123$  KNOTS,  $V_{ENR} = 136$  KNOTS.

Takeoff Field Length for above conditions = 4050 FEET.  $V_1 = 97$  KNOTS,  $V_R = 116$  KNOTS,  $V_2 = 123$  KNOTS,  $V_{ENR} = 136$  KNOTS.

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**WET RUNWAY TAKEOFF PERFORMANCE** (Continued)**EXAMPLE FOR TAKEOFF WITH FLAPS 15°:**

Pressure Altitude = 3000 FEET  
Gross Weight = 11,000 POUNDS  
Ambient Temperature = 5°C  
Wind = 10 KNOTS (HEADWIND)

Runway Gradient = ZERO (level)  
Anti-Ice Systems = ON  
Runway Condition = WET

From Figure 4-25, the Takeoff Field Length is 3240 FEET (dry runway, anti-ice systems on).

From Figure 7-8, the Takeoff Field Length is 3710 FEET (wet runway, anti-ice systems on).  $V_1 = 87$  KNOTS,  $V_R = 102$  KNOTS,  $V_2 = 109$  KNOTS,  $V_{ENR} = 130$  KNOTS.

Takeoff Field Length for above conditions = 3710 FEET.  $V_1 = 87$  KNOTS,  $V_R = 102$  KNOTS,  $V_2 = 109$  KNOTS,  $V_{ENR} = 130$  KNOTS.

LETTER FROM THE DIRECTOR OF THE BUREAU OF LAND MANAGEMENT

Dear Sir:

Reference is made to your letter of 10/11/64 regarding the proposed road through the area shown on the attached map.

The proposed road is shown on the attached map and is subject to the conditions set out in the schedule to the proposed road order.

From time to time the Bureau of Land Management will be in contact with you regarding the progress of the proposed road order.

I am sure that you will be satisfied with the arrangements made for the proposed road and will be glad to hear from you if you have any queries.

Yours faithfully,  
Director, Bureau of Land Management



**TAKEOFF FIELD LENGTH - FEET, FLAPS UP  
(WET RUNWAY OVER A 15 FOOT SCREEN HEIGHT)  
(ANTI-ICE OFF)**

Determine takeoff field length,  $V_1$ ,  $V_R$ ,  $V_2$  and  $V_{ENR}$  from Figure 7-2. If the runway has a gradient, adjust  $V_1$  and takeoff field length using figure 7-1.

If the required distance is greater than the available distance, the airplane weight must be reduced until distance required is less than or equal to distance available.

**TAKEOFF FIELD LENGTH WITH RUNWAY GRADIENT  
FLAPS UP, ANTI-ICE OFF**

ZERO RUNWAY GRADIENT	UPHILL GRADIENT				DOWNHILL GRADIENT			
	SHADED AND NON-SHADED				SHADED		NON-SHADED	
	2%	1.5%	1%	0.5%	-1%	-2%	-1%	-2%
	$V_1 + 7^*$ Knot	$V_1 + 5^*$ Knot	$V_1 + 3^*$ Knot	$V_1 + 2^*$ Knot	$V_1 - 4$ Knots	$V_1 - 8$ Knots	$V_1 + 1^*$ Knot	$V_1 + 1^*$ Knot
2400	2800	2700	2600	2550	2400	2300	2600	2650
2600	3050	2900	2800	2750	2600	2550	2800	2900
2800	3300	3150	3050	3000	2800	2800	3050	3150
3000	3500	3350	3250	3200	3000	3000	3250	3350
3200	3750	3600	3450	3400	3200	3200	3450	3550
3400	4000	3800	3650	3600	3400	3400	3650	3800
3600	4200	4050	3900	3800	3600	3550	3850	4000
3800	4450	4250	4100	4000	3800	3750	4100	4200
4000	4700	4500	4300	4250	4000	3950	4300	4450
4200	4950	4750	4550	4450	4200	4150	4500	4650
4400	5150	4950	4750	4650	4400	4350	4700	4850
4600	5400	5150	4950	4850	4600	4550	4900	5100
4800	5650	5400	5150	5050	4800	4700	5100	5300
5000	5900	5650	5400	5300	5000	4900	5300	5500
5200	6150	5850	5600	5500	5200	5100	5550	5750
5400	6350	6100	5800	5700	5350	5300	5750	5950
5600	6600	6300	6050	5900	5550	5450	5950	6150
5800	6850	6550	6300	6100	5750	5650	6150	6350
6000	7100	6800	6550	6350	5950	5800	6350	6500
6200	7400	7000	6800	6550	6150	6000	6550	6700
6400	7800	7300	7000	6750	6350	6150	6750	6900
6600	8100	7550	7250	6950	6550	6350	6950	7100
6800	8450	7800	7450	7150	6700	6500	7150	7300
7000	8750	8100	7700	7350	6900	6700	7350	7500
7200	9000	8350	7950	7600	7100	6850	7550	7700
7400	9300	8600	8150	7800	7250	7050	7750	7900
7600	9650	8850	8400	8000	7450	7200	7950	8100
7800	10050	9150	8650	8200	7650	7400	8150	8300
8000	10600	9500	8950	8400	7800	7550	8350	8500
8200	11200	9900	9250	8650	8000	7750	8550	8700
8400	11800	10300	9550	8850	8150	7900	8750	8900
8600	12350	10650	9800	9050	8350	8100	8950	9100
8800	12800	10950	10050	9250	8550	8250	9150	9300
9000	13200	11250	10300	9500	8750	8450	9350	9500
9500	14100	12000	10950	10050	9200	8850	9850	9950
10000	15000	12750	11550	10600	9650	9250	10350	10450
10500		13400	12150	11150	10100	9650	10800	10900
11000		14100	12800	11750	10550	10050	11300	11350
11500		14800	13400	12300	10950	10400	11750	11750
12000		15500	14000	12800	11350	10750	12150	12100

\* If the adjusted  $V_1$  is greater than  $V_R$ , the value of  $V_R$  must be used for  $V_1$ .



Figure 7-1



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**SEA LEVEL**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS							VENR = 138 KIAS							WEIGHT = 12200 LBS							VENR = 137 KIAS						
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	V1 DIST			V1 DIST	10 KTS	20 KTS	30 KTS					
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS		FT
-25	99	4670	98	3750	99	3510	100	3290	100	3070	118	125	-25	97	4550	97	3650	98	3420	98	3200	99	2980	117	124		
-20	99	4750	98	3820	99	3580	100	3350	100	3130	118	125	-20	97	4630	97	3710	98	3480	98	3260	99	3040	117	124		
-15	98	4820	98	3880	99	3640	100	3410	100	3190	118	125	-15	97	4700	97	3780	98	3540	98	3320	99	3100	117	124		
-10	98	4890	98	3950	99	3710	100	3470	100	3250	118	125	-10	97	4770	97	3840	98	3610	98	3380	99	3160	117	124		
-5	98	4960	98	4010	99	3770	100	3540	100	3310	118	125	-5	97	4840	97	3900	98	3670	98	3440	99	3210	117	124		
0	98	5030	98	4080	99	3830	100	3600	100	3370	118	125	0	97	4910	97	3970	98	3730	98	3500	99	3270	117	124		
5	98	5100	98	4140	99	3890	100	3660	100	3430	118	125	5	97	4980	97	4030	98	3790	98	3560	99	3330	117	124		
10	98	5180	98	4200	99	3960	100	3720	100	3480	118	125	10	97	5050	97	4090	98	3850	98	3620	99	3390	117	124		
15	98	5250	98	4270	99	4020	100	3780	100	3540	118	125	15	97	5120	97	4160	97	3910	98	3680	99	3450	117	124		
20	98	5310	98	4330	99	4080	100	3840	100	3600	117	125	20	97	5180	97	4220	97	3970	98	3740	99	3500	117	124		
25	99	5500	99	4490	100	4230	100	3980	101	3740	118	125	25	98	5360	98	4370	98	4110	99	3870	100	3630	117	124		
30	102	5890	101	4810	102	4540	102	4270	103	4010	119	125	30	100	5730	100	4680	100	4410	101	4150	102	3900	118	124		
35	104	6330	103	5180	104	4890	105	4600	105	4330	119	125	35	103	6160	102	5040	103	4750	103	4470	104	4200	118	124		
40	107	6850	106	5610	106	5300	107	5000	107	4700	120	125	40	105	6670	105	5450	105	5150	106	4850	106	4560	119	124		
45	110	7470	109	6110	109	5780	109	5450	110	5130	121	125	45	108	7260	107	5940	108	5610	108	5290	109	4980	120	124		
50	112	8230	111	6690	112	6320	112	5970	112	5630	122	125	50	111	7940	110	6490	110	6140	111	5790	111	5460	121	124		
53	112	9060	113	7060	113	6680	113	6310	114	5950	122	125	54	113	8710	112	6980	112	6600	113	6230	113	5880	121	124		
54	112	9380	113	7180	114	6800	114	6420	114	6060	122	125	55	113	8990	112	7100	113	6710	113	6340	113	5980	121	124		

WEIGHT = 12000 LBS							VENR = 135 KIAS							WEIGHT = 11800 LBS							VENR = 134 KIAS						
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	V1 DIST			V1 DIST	10 KTS	20 KTS	30 KTS					
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS		FT
-25	96	4430	96	3550	96	3320	97	3100	98	2890	116	123	-25	94	4310	94	3450	95	3230	96	3010	97	2810	115	122		
-20	96	4500	96	3610	96	3380	97	3160	98	2950	116	123	-20	94	4380	94	3510	95	3290	96	3070	97	2860	115	122		
-15	96	4570	96	3670	96	3440	97	3220	98	3010	116	123	-15	94	4450	94	3570	95	3350	96	3130	96	2920	115	122		
-10	96	4640	96	3730	96	3500	97	3280	98	3060	116	123	-10	94	4520	94	3630	95	3410	96	3190	96	2980	115	122		
-5	96	4710	96	3800	96	3560	97	3340	98	3120	116	123	-5	94	4590	94	3690	95	3460	96	3240	96	3030	115	122		
0	96	4780	96	3860	96	3620	97	3400	98	3180	116	123	0	94	4660	94	3750	95	3520	96	3300	96	3090	115	122		
5	96	4840	96	3920	96	3680	97	3460	98	3230	116	123	5	94	4720	94	3810	95	3580	96	3360	96	3140	115	122		
10	96	4910	96	3980	96	3740	97	3510	98	3290	116	123	10	94	4780	94	3870	95	3640	96	3410	96	3190	115	122		
15	95	4980	95	4040	96	3800	97	3570	98	3350	116	123	15	94	4850	94	3930	95	3700	96	3470	96	3250	115	122		
20	95	5050	95	4100	96	3860	97	3630	98	3400	116	123	20	94	4910	94	3990	95	3750	96	3530	96	3300	115	122		
25	96	5200	96	4230	97	3990	97	3750	98	3510	116	123	25	95	5060	95	4110	95	3870	96	3640	97	3410	115	122		
30	99	5570	98	4540	99	4280	100	4020	100	3770	116	123	30	97	5390	97	4390	97	4140	98	3890	99	3650	115	122		
35	101	5980	101	4880	101	4600	102	4330	102	4060	117	123	35	100	5790	99	4720	100	4450	100	4180	101	3930	116	122		
40	104	6460	103	5280	104	4980	104	4690	105	4410	118	123	40	102	6260	102	5110	102	4820	103	4530	103	4260	117	122		
45	107	7030	106	5750	106	5420	107	5110	107	4810	119	123	45	105	6810	104	5560	105	5240	105	4940	106	4640	118	122		
50	110	7680	108	6280	109	5930	109	5600	110	5270	120	123	50	108	7430	107	6070	107	5730	108	5400	108	5080	118	122		
55	112	8400	111	6860	111	6490	112	6120	112	5770	120	123	55	111	8120	109	6630	110	6260	110	5910	110	5560	119	122		

WEIGHT = 11600 LBS							VENR = 133 KIAS							WEIGHT = 11400 LBS							VENR = 132 KIAS						
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	V1 DIST			V1 DIST	10 KTS	20 KTS	30 KTS					
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS		FT
-25	93	4230	93	3380	94	3140	94	2930	95	2730	114	121	-25	93	4230	93	3380	93	3110	93	2860	94	2660	113	121		
-20	93	4300	93	3440	94	3200	94	2980	95	2780	114	121	-20	93	4290	93	3430	93	3170	93	2910	94	2710	113	121		
-15	93	4370	93	3500	94	3250	94	3040	95	2830	114	121	-15	93	4360	93	3490	93	3230	93	2970	94	2760	113	121		
-10	93	4430	93	3560	94	3310	94	3090	95	2890	114	121	-10	93	4430	93	3550	93	3280	93	3020	94	2820	113	121		
-5	93	4500	93	3620	94	3370	94	3150	95	2940	114	121	-5	93	4490	93	3610	93	3340	93	3080	94	2870	113	121		
0	93	4570	93	3680																							



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
SEA LEVEL

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS																	
VENR = 131 KIAS								VENR = 128 KIAS																	
TEMP DEG C	TAILWIND 10 KTS KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS												
			10 KTS KIAS FT	20 KTS KIAS FT	30 KTS KIAS FT					10 KTS KIAS FT	20 KTS KIAS FT	30 KTS KIAS FT													
-25	93	4220	93	3370	93	3110	93	2860	93	2620	112	120	-25	94	4220	94	3370	94	3110	94	2860	94	2620	110	119
-20	93	4290	93	3430	93	3170	93	2910	93	2670	112	120	-20	94	4280	94	3430	94	3170	94	2920	94	2670	110	119
-15	93	4350	93	3490	93	3220	93	2970	93	2720	112	120	-15	94	4350	94	3490	94	3230	94	2970	94	2730	110	119
-10	93	4420	93	3550	93	3280	93	3020	93	2770	112	120	-10	94	4410	94	3550	94	3280	94	3030	94	2780	110	119
-5	93	4490	93	3610	93	3340	93	3080	93	2830	112	120	-5	94	4480	94	3610	94	3340	94	3080	94	2830	110	119
0	93	4550	93	3670	93	3400	93	3130	93	2880	112	120	0	94	4550	94	3670	94	3400	94	3140	94	2890	110	119
5	93	4620	93	3730	93	3460	93	3190	93	2930	112	120	5	94	4610	94	3730	94	3460	94	3190	94	2940	110	119
10	93	4690	93	3790	93	3510	93	3250	93	2990	112	120	10	94	4680	94	3790	94	3510	94	3250	94	2990	110	119
15	93	4750	93	3850	93	3570	93	3300	93	3040	112	120	15	94	4740	94	3850	94	3570	94	3300	94	3050	110	119
20	93	4820	93	3910	93	3630	93	3360	93	3100	112	120	20	94	4810	94	3910	94	3630	94	3360	94	3100	110	119
25	93	4820	93	3910	93	3630	93	3360	93	3100	111	118	25	93	4810	93	3910	93	3620	93	3350	93	3090	110	119
30	91	4780	91	3870	92	3640	92	3410	93	3190	111	118	30	90	4690	90	3800	90	3520	90	3250	90	2990	109	117
35	93	5090	93	4120	94	3880	94	3640	95	3410	111	118	35	89	4700	89	3790	90	3560	90	3340	91	3120	108	116
40	96	5490	95	4450	96	4190	97	3930	97	3690	112	118	40	82	5040	81	4070	92	3830	93	3590	93	3360	109	115
45	99	5950	98	4830	99	4550	99	4280	100	4010	113	118	45	94	5460	94	4410	94	4150	95	3890	96	3650	110	115
50	102	6480	101	5270	101	4960	102	4670	102	4380	114	118	50	97	5930	97	4800	97	4520	98	4240	98	3980	111	115
55	104	7060	103	5740	103	5410	104	5090	104	4790	114	118	55	100	6450	99	5220	99	4920	100	4620	100	4340	111	115

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS																	
VENR = 125 KIAS								VENR = 122 KIAS																	
TEMP DEG C	TAILWIND 10 KTS KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS												
			10 KTS KIAS FT	20 KTS KIAS FT	30 KTS KIAS FT					10 KTS KIAS FT	20 KTS KIAS FT	30 KTS KIAS FT													
-25	94	4220	94	3380	94	3120	94	2870	94	2630	108	118	-25	94	4230	94	3400	94	3140	94	2890	94	2650	106	117
-20	94	4280	94	3440	94	3180	94	2930	94	2690	108	118	-20	94	4290	94	3450	94	3190	94	2940	94	2700	107	117
-15	94	4350	94	3500	94	3240	94	2980	94	2740	108	118	-15	94	4360	94	3510	94	3250	94	3000	94	2750	107	117
-10	94	4410	94	3560	94	3290	94	3040	94	2790	108	118	-10	94	4420	94	3570	94	3310	94	3050	94	2810	107	117
-5	94	4480	94	3620	94	3350	94	3090	94	2840	108	118	-5	94	4490	94	3630	94	3360	94	3110	94	2860	107	117
0	94	4550	94	3680	94	3410	94	3150	94	2900	108	118	0	94	4560	94	3690	94	3420	94	3160	94	2910	107	117
5	94	4610	94	3740	94	3460	94	3200	94	2950	108	118	5	94	4620	94	3750	94	3480	94	3220	94	2970	107	117
10	94	4680	94	3800	94	3520	94	3260	94	3000	108	118	10	94	4690	94	3810	94	3540	94	3270	94	3020	107	117
15	94	4740	94	3860	94	3580	94	3310	94	3060	108	118	15	94	4750	94	3870	94	3590	94	3330	94	3070	107	117
20	94	4810	94	3920	94	3640	94	3370	94	3110	108	118	20	94	4820	94	3930	94	3650	94	3380	94	3130	107	117
25	93	4800	93	3910	93	3630	93	3360	93	3100	108	118	25	93	4810	93	3920	93	3640	93	3370	93	3110	106	117
30	90	4680	90	3790	90	3520	90	3250	90	2990	107	116	30	90	4680	90	3800	90	3520	90	3260	90	3000	105	115
35	88	4560	88	3680	88	3400	88	3140	88	2890	106	114	35	88	4550	88	3680	88	3400	88	3140	88	2890	104	113
40	87	4620	87	3720	88	3490	89	3270	89	3050	106	113	40	85	4420	85	3550	85	3280	85	3020	86	2810	103	111
45	90	4990	90	4020	90	3770	91	3540	92	3300	106	113	45	86	4540	85	3640	86	3410	87	3190	87	2980	103	110
50	93	5410	92	4360	93	4100	93	3840	94	3590	107	113	50	88	4920	88	3950	89	3710	89	3460	90	3230	104	110
55	96	5870	95	4740	95	4460	96	4180	96	3910	108	113	55	91	5330	91	4280	91	4020	92	3760	92	3520	105	110

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS																	
VENR = 118 KIAS								VENR = 115 KIAS																	
TEMP DEG C	TAILWIND 10 KTS KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS												
			10 KTS KIAS FT	20 KTS KIAS FT	30 KTS KIAS FT					10 KTS KIAS FT	20 KTS KIAS FT	30 KTS KIAS FT													
-25	94	4250	94	3420	94	3160	94	2910	94	2680	105	116	-25	94	4280	94	3450	94	3200	94	2950	94	2710	103	115
-20	94	4310	94	3480	94	3220	94	2970	94	2730	105	116	-20	94	4350	94	3510	94	3250	94	3000	94	2760	103	115
-15	94	4380	94	3540	94	3270	94	3020	94	2780	105	116	-15	94	4410	94	3570	94	3310	94	3060	94	2810	103	115
-10	94	4440	94	3600	94	3330	94	3080	94	2830	105	116	-10	94	4480	94	3630	94	3370	94	3110	94	2870	103	115
-5	94	4510	94	3650	94	3390	94	3130	94	2880	105	116	-5	94	4540	94	3690	94	3420	94	3170	94	2920	103	115
0	94	4580	94	3710	94	3450	94	3190	94	2940	105	116	0	94	4610	94	3750	94	3480	94	3220	94	2970	103	115
5	94	4640	94	3770	94	3500	94	3240	94	2990	105	116	5	94	4670	94	3810	94	3540	94	3280	94	3030	103	115
10	94	4710	94	3830	94	3560	94	3300	94	3040	105	116	10	94	4740	94	3870	94	3590	94	3330	94	3080	103	115
15	94	4770	94	3890	94	3620	94	3350	94	3100	105	116	15	94	4810	94	3930	94	3650	94	3390	94	3130	103	115
20	94	4840	94	3950	94	3680	94	3410	94	3150	105	116	20	94	4870	94	3990	94	3710	94	3440	94	3190	103	115
25	93	4830	93	3940	93	3660	93	3390	93	3140	105	116	25	93	4850	93	3970	93	3690	93	3430	93	3170	103	115
30	91	4690	91	3810	91	3540	91	3270	91	3020	103	114	30	91	4710	91	3830	91	3560	91	3300	91	3040	102	113
35	88	4550	88	3680	88	3410	88	3150	88	2900	102	112	35	88	4560	88	3690	88	3420	88	3170	88	2920	100	111
40	85	4410	85	3550	85	3280	85	3020	85	2770	101	110	40	86	4410	86	3550	86	3290	86	3030	86	2780	99	108
45	83	4270	83	3410	83	3150	83	2910	84	2710	100	108	45	83	4260	83	3410	83	3150	83	2900	83	2650	98	106
50	84	4440	84	3550	84	3320	85	3110	85	2890	100	107	50	80	4120	80	3280	80	3020	81	2800	81	2600	97	104



TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
1000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS																	
VENR = 138 KIAS								VENR = 137 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS						VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS						VR V2						
			10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST	10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST					10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS									
-25	99	4850	99	3910	99	3670	100	3430	101	3210	118	125	-25	98	4730	97	3800	98	3570	99	3340	99	3120	117	124
-20	99	4930	99	3980	99	3740	100	3500	101	3270	118	125	-20	98	4800	97	3870	98	3630	99	3400	99	3180	117	124
-15	99	5010	99	4050	99	3800	100	3570	101	3340	118	125	-15	97	4880	97	3940	98	3700	99	3470	99	3240	117	124
-10	99	5080	99	4110	99	3870	100	3630	101	3400	118	125	-10	97	4950	97	4000	98	3760	99	3530	99	3300	117	124
-5	99	5150	99	4180	99	3930	100	3690	101	3460	118	125	-5	97	5020	97	4070	98	3820	99	3590	99	3360	117	124
0	99	5230	99	4250	99	4000	100	3760	101	3520	118	125	0	97	5090	97	4130	98	3890	99	3650	99	3420	117	124
5	99	5300	98	4310	99	4050	100	3820	100	3580	118	125	5	97	5160	97	4200	98	3950	99	3710	99	3480	117	124
10	99	5380	98	4390	99	4130	100	3890	100	3650	118	125	10	97	5240	97	4270	98	4020	99	3780	99	3540	117	124
15	99	5500	99	4490	99	4230	100	3980	101	3740	118	125	15	98	5360	98	4370	98	4120	99	3870	99	3630	117	124
20	100	5680	100	4640	100	4380	101	4110	101	3870	118	125	20	98	5530	98	4510	99	4260	99	4000	100	3760	117	124
25	101	5930	101	4850	101	4580	102	4310	103	4060	118	125	25	100	5780	99	4720	100	4450	101	4190	101	3940	117	124
30	103	6330	103	5190	103	4900	104	4620	104	4340	119	125	30	102	6160	102	5040	102	4760	103	4490	103	4220	118	124
35	106	6800	105	5580	105	5270	106	4970	107	4680	120	125	35	104	6620	104	5420	104	5120	105	4830	105	4550	119	124
40	109	7390	108	6060	108	5730	108	5410	109	5100	121	125	40	107	7180	106	5890	107	5570	107	5250	108	4950	120	124
45	111	8140	110	6620	111	6270	111	5920	111	5580	122	125	45	110	7850	109	6430	109	6090	110	5750	110	5420	120	124
50	110	9560	113	7250	113	6870	113	6490	114	6120	122	125	50	111	8900	111	7040	112	6670	112	6300	112	5940	120	124
51	110	9900	113	7380	114	6990	114	6610	114	6240	122	125	51	111	9210	112	7170	112	6790	113	6420	113	6050	121	124
52	111	9520	112	7300	113	6910	113	6530	113	6170	121	124	52	111	9520	112	7300	113	6910	113	6530	113	6170	121	124

WEIGHT = 12000 LBS								WEIGHT = 11800 LBS																	
VENR = 135 KIAS								VENR = 134 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS						VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS						VR V2						
			10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST	10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST					10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS									
-25	96	4590	96	3690	97	3460	97	3230	98	3020	116	123	-25	95	4470	95	3580	95	3360	96	3140	97	2930	115	122
-20	96	4670	96	3750	97	3520	97	3300	98	3080	116	123	-20	95	4540	95	3650	95	3420	96	3200	97	2990	115	122
-15	96	4740	96	3820	97	3590	97	3360	98	3140	116	123	-15	95	4610	95	3710	95	3480	96	3260	97	3050	115	122
-10	96	4810	96	3880	97	3650	97	3420	98	3200	116	123	-10	95	4680	95	3780	95	3550	96	3320	97	3100	115	122
-5	96	4880	96	3950	97	3710	97	3480	98	3260	116	123	-5	94	4750	95	3840	95	3610	96	3380	97	3160	115	122
0	96	4950	96	4010	97	3770	97	3540	98	3320	116	123	0	94	4820	94	3900	95	3670	96	3440	97	3220	115	122
5	96	5020	96	4080	96	3840	97	3600	98	3370	116	123	5	94	4890	94	3960	95	3730	96	3500	97	3280	115	122
10	96	5100	96	4140	96	3900	97	3670	98	3440	116	123	10	94	4960	94	4030	95	3790	96	3560	97	3340	115	122
15	96	5200	96	4240	97	3990	97	3750	98	3520	116	123	15	95	5060	95	4120	95	3880	96	3640	97	3420	115	122
20	97	5360	97	4370	97	4120	98	3870	99	3640	116	123	20	95	5200	95	4240	96	3990	97	3750	97	3520	115	122
25	98	5610	98	4580	99	4320	99	4060	100	3810	116	123	25	97	5430	96	4430	97	4180	98	3930	98	3690	115	122
30	100	5980	100	4890	101	4610	101	4340	102	4080	117	123	30	99	5790	98	4730	99	4460	100	4200	100	3940	116	122
35	103	6420	102	5250	103	4960	103	4670	104	4390	118	123	35	101	6220	101	5080	101	4790	102	4520	102	4240	117	122
40	106	6980	105	5700	105	5380	106	5080	106	4780	118	123	40	104	6740	103	5510	104	5200	104	4910	105	4610	117	122
45	109	7600	107	6220	108	5880	108	5550	109	5230	119	123	45	107	7350	106	6010	106	5680	107	5360	107	5050	118	122
50	111	8310	110	6810	110	6440	111	6080	111	5730	120	123	50	110	8040	108	6570	109	6220	109	5870	109	5530	119	122
52	112	8730	111	7060	111	6680	112	6310	112	5950	120	123	52	111	8340	109	6820	110	6450	110	6090	110	5740	119	122

WEIGHT = 11600 LBS								WEIGHT = 11400 LBS																	
VENR = 133 KIAS								VENR = 132 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS						VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS						VR V2						
			10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST	10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST					10 KTS V1 DIST	20 KTS V1 DIST	30 KTS V1 DIST										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS									
-25	93	4350	93	3490	94	3260	95	3050	95	2840	114	121	-25	93	4320	93	3460	93	3190	93	2960	94	2760	113	121
-20	93	4420	93	3550	94	3330	95	3110	95	2900	114	121	-20	93	4390	93	3520	93	3250	93	3020	94	2820	113	121
-15	93	4490	93	3610	94	3380	95	3170	95	2960	114	121	-15	93	4460	93	3580	93	3310	93	3080	94	2870	113	121
-10	93	4560	93	3670	94	3440	95	3230	95	3010	114	121	-10	93	4530	93	3640	93	3370	93	3140	94	2930	113	121
-5	93	4620	93	3730	94	3500	95	3280	95	3070	114	121	-5	93	4600	93	3700	93	3430	93	3190	94	2980	113	121
0	93	4690	93	3790	94	3560	95	3340	95	3120	114	121	0	93	4670	93	3770	93	3490	93	3250	94	3040	113	121
5	93	4760	93	3850	94	3620	95	3400	95	3180	114	121	5	93	4730	93	3830	93	3550	93	3310	94	3090	113	121
10	93	4830	93	3920	94	3680	95	3460	95	3240	114	121	10	93	4800	93	3890	93	3600	93	3370	94	3150	113	121
15	93	4930	93	4000	94	3770	95	3540	95	3310	114	121	15	92	4840	92	3920	93	3660	93	3430	94	3220	113	121
20	94	5060	94	4120	95	3880	95	3640	96	3420	114	121	20	92	4920	93	4000	93	3760	94	3530	95	3310	113	120
25	95	5260	95	4290	96	4040	96	3800	97	3560	114	121	25	94	5110	93	4160	94	3910	95	3680	95	3450	113	120
30	97	5610	97	4580	98	4310	98	4060	99	3810	115	121	30	96	5440	95	4430	96	4170	97	3920	97	3680	113	120
35	100	6020	99	4910	100	4630	100	4360	101																



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
1000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 11000 LBS								VENR = 130 KIAS								WEIGHT = 10500 LBS								VENR = 128 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT																
-25	93 4310	93 3450	93 3190	93 2930	93 2690	111 120	-25	93 4310	93 3450	93 3190	93 2940	93 2690	110 119																		
-20	93 4380	93 3510	93 3250	93 2990	93 2740	111 120	-20	93 4370	93 3510	93 3250	93 2990	93 2740	110 119																		
-15	93 4450	93 3580	93 3300	93 3040	93 2790	111 120	-15	93 4440	93 3570	93 3310	93 3050	93 2800	110 119																		
-10	93 4520	93 3640	93 3360	93 3100	93 2850	111 120	-10	93 4510	93 3640	93 3370	93 3100	93 2850	110 119																		
-5	93 4590	93 3700	93 3420	93 3160	93 2900	111 120	-5	93 4580	93 3700	93 3420	93 3160	93 2910	110 119																		
0	93 4650	93 3760	93 3480	93 3220	93 2960	111 120	0	93 4650	93 3760	93 3480	93 3220	93 2960	110 119																		
5	93 4720	93 3820	93 3540	93 3270	93 3020	111 120	5	93 4710	93 3820	93 3540	93 3280	93 3020	110 119																		
10	93 4790	93 3880	93 3600	93 3330	93 3070	111 120	10	93 4780	93 3880	93 3600	93 3330	93 3070	110 119																		
15	93 4830	93 3920	93 3630	93 3360	93 3100	111 120	15	93 4820	93 3910	93 3630	93 3360	93 3100	110 119																		
20	92 4840	92 3930	92 3640	92 3370	92 3140	111 119	20	92 4830	92 3920	92 3640	92 3370	92 3100	109 118																		
25	91 4830	91 3920	91 3680	92 3460	93 3240	111 118	25	91 4790	91 3880	91 3600	91 3330	91 3070	109 117																		
30	92 5090	92 4130	93 3890	94 3650	94 3420	111 118	30	89 4720	89 3820	89 3590	90 3370	91 3150	108 116																		
35	95 5450	95 4440	95 4170	96 3920	96 3680	112 118	35	91 5010	90 4050	91 3810	92 3580	92 3350	108 115																		
40	98 5900	97 4800	98 4520	98 4250	99 3990	112 118	40	93 5410	93 4380	94 4120	94 3870	95 3630	109 115																		
45	100 6420	100 5230	100 4930	101 4640	101 4360	113 118	45	96 5880	96 4770	96 4490	97 4220	97 3950	110 115																		
50	103 7000	102 5700	103 5380	103 5060	103 4760	114 118	50	99 6390	98 5190	99 4890	99 4600	99 4320	111 115																		
52	104 7250	103 5900	104 5570	104 5250	104 4940	114 118	52	100 6620	99 5370	100 5070	100 4760	100 4470	111 115																		

WEIGHT = 10000 LBS								VENR = 126 KIAS								WEIGHT = 9500 LBS								VENR = 122 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT																
-25	93 4310	93 3460	93 3200	93 2950	93 2700	108 118	-25	93 4320	93 3470	93 3210	93 2960	93 2720	106 117																		
-20	93 4370	93 3520	93 3250	93 3000	93 2750	108 118	-20	93 4380	93 3530	93 3270	93 3010	93 2770	106 117																		
-15	93 4440	93 3580	93 3310	93 3060	93 2810	108 118	-15	93 4450	93 3590	93 3330	93 3070	93 2830	106 117																		
-10	93 4510	93 3640	93 3370	93 3110	93 2860	108 118	-10	93 4520	93 3650	93 3390	93 3130	93 2880	106 117																		
-5	93 4580	93 3700	93 3430	93 3170	93 2920	108 118	-5	93 4580	93 3720	93 3450	93 3180	93 2930	106 117																		
0	93 4640	93 3760	93 3490	93 3230	93 2970	108 118	0	93 4650	93 3780	93 3500	93 3240	93 2990	106 117																		
5	93 4710	93 3830	93 3550	93 3280	93 3030	108 118	5	93 4720	93 3840	93 3560	93 3300	93 3040	106 117																		
10	93 4780	93 3880	93 3610	93 3340	93 3080	108 118	10	93 4780	93 3900	93 3620	93 3350	93 3100	106 117																		
15	93 4810	93 3920	93 3640	93 3370	93 3110	108 118	15	93 4820	93 3930	93 3650	93 3380	93 3120	106 117																		
20	92 4820	92 3920	92 3640	92 3370	92 3110	108 117	20	92 4820	92 3930	92 3650	92 3380	92 3120	106 116																		
25	91 4780	91 3880	91 3600	91 3330	91 3070	107 116	25	91 4780	91 3890	91 3610	91 3340	91 3080	105 115																		
30	88 4680	88 3780	88 3510	88 3240	88 2980	106 114	30	89 4670	89 3780	89 3510	89 3240	89 2990	105 113																		
35	87 4620	87 3730	87 3500	88 3280	89 3060	106 113	35	86 4550	86 3670	86 3400	86 3130	86 2880	104 112																		
40	89 4940	89 3990	89 3750	90 3510	91 3290	106 113	40	85 4520	85 3640	85 3410	86 3190	87 2980	103 110																		
45	92 5360	91 4330	92 4070	93 3820	93 3580	107 113	45	87 4880	87 3920	88 3680	88 3450	89 3220	104 110																		
50	95 5820	94 4710	94 4430	95 4160	95 3900	108 113	50	90 5290	90 4260	90 4000	91 3750	91 3500	104 110																		
52	96 6030	95 4870	95 4590	96 4310	96 4040	108 113	52	91 5470	91 4400	91 4140	92 3880	92 3630	105 110																		

WEIGHT = 9000 LBS								VENR = 118 KIAS								WEIGHT = 8500 LBS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT																
-25	94 4330	94 3500	94 3230	94 2980	94 2740	105 116	-25	94 4360	94 3530	94 3270	94 3020	94 2780	103 115																		
-20	94 4400	94 3550	94 3290	94 3040	94 2790	105 116	-20	94 4430	94 3590	94 3320	94 3070	94 2830	103 115																		
-15	94 4470	94 3610	94 3350	94 3090	94 2850	105 116	-15	94 4500	94 3650	94 3380	94 3130	94 2880	103 115																		
-10	94 4530	94 3680	94 3410	94 3150	94 2900	105 116	-10	94 4570	94 3710	94 3440	94 3180	94 2940	103 115																		
-5	94 4600	94 3740	94 3470	94 3210	94 2960	105 116	-5	94 4630	94 3770	94 3500	94 3240	94 2990	103 115																		
0	94 4670	94 3800	94 3530	94 3260	94 3010	105 116	0	94 4700	94 3830	94 3560	94 3300	94 3050	103 115																		
5	94 4740	94 3860	94 3590	94 3320	94 3070	105 116	5	94 4770	94 3890	94 3620	94 3360	94 3100	103 115																		
10	93 4800	93 3920	93 3640	93 3370	93 3120	105 116	10	94 4830	94 3950	94 3670	94 3410	94 3150	103 115																		
15	93 4840	93 3950	93 3670	93 3400	93 3150	105 116	15	93 4860	93 3980	93 3700	93 3430	93 3180	103 115																		
20	92 4840	92 3950	92 3670	92 3400	92 3140	104 115	20	92 4860	92 3970	92 3700	92 3430	92 3170	102 114																		
25	91 4790	91 3900	91 3620	91 3350	91 3100	104 114	25	91 4810	91 3920	91 3650	91 3380	91 3120	102 113																		
30	89 4670	89 3790	89 3520	89 3250	89 3000	103 112	30	89 4680	89 3800	89 3530	89 3270	89 3020	101 111																		
35	86 4550	86 3670	86 3400	86 3140	86 2890	102 110	35	86 4550	86 3680	86 3410	86 3150	86 2900	100 109																		
40	84 4410	84 3540	84 3270	84 3010	84 2760	101 108	40	84 4400	84 3540	84 3270	84 3010	84 2770	99 107																		
45	83 4420	83 3540	83 3320	84 3110	85 2900	100 107	45	81 4250	81 3400	81 3140	81 2880	81 2640	98 105																		
50	85 4780	85 3830	86 3590	86 3360	87 3140	101 107	50	81 4300	81 3430	81 3210	82 3000	82 2790	97 104																		
52	87 4930	86 3960	87 3710	87 3470	88 3240	101 107	52	82 4430	81 3530	82 3310	83 3090	83 2880	98 104																		

Figure 7-2 (Sheet 4)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**2000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								VENR = 138 KIAS								WEIGHT = 12200 LBS								VENR = 137 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT						
-25	99	5020	99	4060	100	3810	100	3580	101	3350	118	125	-25	98	4890	98	3950	98	3710	99	3480	100	3250	117	124						
-20	99	5110	99	4130	100	3890	100	3650	101	3410	118	125	-20	98	4970	98	4020	98	3780	99	3540	100	3320	117	124						
-15	99	5180	99	4200	100	3950	100	3710	101	3480	118	125	-15	98	5050	98	4090	98	3840	99	3610	100	3380	117	124						
-10	99	5260	99	4270	99	4020	100	3780	101	3540	118	125	-10	98	5120	98	4160	98	3910	99	3670	100	3440	117	124						
-5	99	5340	99	4340	99	4090	100	3840	101	3610	118	125	-5	98	5200	97	4230	98	3980	99	3740	99	3500	117	124						
0	99	5410	99	4410	99	4160	100	3910	101	3670	118	125	0	98	5270	97	4290	98	4040	99	3800	99	3560	117	124						
5	99	5490	99	4480	99	4220	100	3970	101	3730	118	125	5	97	5350	97	4360	98	4110	99	3860	99	3630	117	124						
10	99	5560	99	4550	99	4290	100	4040	101	3800	118	125	10	97	5420	97	4430	98	4170	99	3930	99	3690	117	124						
15	100	5770	100	4730	100	4460	101	4200	101	3940	118	125	15	98	5620	98	4600	99	4340	100	4080	100	3840	117	124						
20	101	6030	101	4950	101	4670	102	4400	103	4140	118	125	20	100	5880	99	4810	100	4540	101	4280	101	4020	117	124						
25	103	6380	102	5240	103	4950	104	4670	104	4390	119	125	25	102	6210	101	5100	102	4810	102	4540	103	4270	118	124						
30	105	6780	104	5570	105	5270	105	4970	106	4680	120	125	30	104	6600	103	5420	103	5120	104	4830	105	4550	119	124						
35	108	7320	107	6020	107	5700	108	5380	108	5070	120	125	35	106	7120	105	5850	106	5530	106	5220	107	4920	119	124						
40	110	8050	109	6560	110	6210	110	5870	110	5540	121	125	40	109	7750	108	6370	108	6030	109	5700	109	5370	120	124						
45	109	9440	112	7190	112	6810	112	6440	113	6080	122	125	45	110	8810	110	6980	111	6610	111	6250	112	5900	121	124						
46	109	9730	112	7320	113	6930	113	6560	113	6190	122	125	48	110	9710	112	7370	112	6980	113	6600	113	6230	121	124						
48			113	7590	114	7190	114	6800	114	6420	122	125	49	110	10040	112	7500	113	7110	113	6720	113	6350	122	124						

WEIGHT = 12000 LBS								VENR = 136 KIAS								WEIGHT = 11800 LBS								VENR = 134 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT	KIAS	FT				
-25	96	4750	96	3830	97	3590	97	3360	98	3140	116	123	-25	95	4620	95	3720	95	3490	96	3270	97	3050	115	122						
-20	96	4830	96	3900	97	3660	97	3430	98	3210	116	123	-20	95	4700	95	3790	95	3560	96	3330	97	3110	115	122						
-15	96	4900	96	3960	97	3720	97	3490	98	3270	116	123	-15	95	4770	95	3850	95	3620	96	3390	97	3170	115	122						
-10	96	4980	96	4030	97	3790	97	3560	98	3330	116	123	-10	95	4840	95	3920	95	3680	96	3450	97	3230	115	122						
-5	96	5050	96	4100	97	3860	97	3620	98	3390	116	123	-5	95	4910	95	3980	95	3750	96	3520	97	3290	115	122						
0	96	5120	96	4160	97	3920	97	3680	98	3450	116	123	0	95	4980	95	4050	95	3810	96	3580	97	3350	115	122						
5	96	5190	96	4230	97	3980	97	3750	98	3510	116	123	5	95	5050	95	4110	95	3870	96	3640	97	3410	115	122						
10	96	5270	96	4300	97	4050	97	3810	98	3570	116	123	10	95	5130	95	4180	95	3930	96	3700	97	3470	115	122						
15	97	5450	97	4450	97	4200	98	3950	99	3710	116	123	15	95	5290	95	4320	96	4070	97	3830	97	3590	115	122						
20	98	5700	98	4670	99	4400	99	4140	100	3890	116	123	20	97	5530	96	4520	97	4260	98	4010	98	3760	115	122						
25	100	6030	100	4940	100	4660	101	4390	101	4130	117	123	25	98	5840	98	4780	99	4510	99	4240	100	3990	116	122						
30	102	6400	101	5250	102	4960	103	4670	103	4400	117	123	30	100	6200	100	5080	101	4790	101	4520	102	4250	116	122						
35	105	6900	104	5660	104	5350	105	5050	105	4760	118	123	35	103	6690	102	5480	103	5180	103	4880	104	4590	117	122						
40	107	7510	106	6170	107	5830	107	5500	108	5190	119	123	40	106	7270	105	5960	105	5630	106	5320	106	5010	118	122						
45	110	8220	109	6750	109	6390	110	6030	110	5690	120	123	45	109	7950	107	6520	108	6170	108	5830	109	5490	119	122						
49	110	9230	111	7260	111	6870	112	6500	112	6130	120	123	50	111	8750	110	7140	110	6760	111	6390	111	6020	119	122						
50	110	9560	112	7390	112	7000	112	6610	112	6240	121	123																			

WEIGHT = 11600 LBS								VENR = 133 KIAS								WEIGHT = 11400 LBS								VENR = 132 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT	KIAS	FT				
-25	93	4500	93	3620	94	3390	95	3170	96	2960	114	121	-25	93	4430	93	3550	93	3290	94	3080	94	2870	113	120						
-20	93	4570	93	3680	94	3450	95	3230	96	3020	114	121	-20	93	4500	93	3620	93	3350	93	3140	94	2930	113	121						
-15	93	4640	93	3740	94	3520	95	3290	96	3080	114	121	-15	93	4570	93	3680	93	3420	93	3200	94	2990	113	121						
-10	93	4710	93	3810	94	3580	95	3350	95	3140	114	121	-10	93	4640	93	3740	93	3480	93	3260	94	3040	113	121						
-5	93	4780	93	3870	94	3640	95	3410	95	3200	114	121	-5	93	4710	93	3810	93	3540	93	3310	94	3100	113	121						
0	93	4850	93	3930	94	3700	95	3470	95	3250	114	121	0	93	4780	93	3870	93	3600	93	3370	94	3160	113	121						
5	93	4920	93	4000	94	3760	95	3530	95	3310	114	121	5	93	4850	93	3940	93	3660	93	3430	94	3210	113	121						
10	93	4990	93	4060	94	3820	95	3590	95	3370	114	121	10	93	4930	93	4000	93	3720	93	3490	94	3270	113	121						
15	94	5150	94	4190	95	3950	95	3710	96	3480	114	121	15	92	5000	93	4070	93	3830	94	3600	95	3380	113	120						
20	95	5360	95	4370	96	4120	96	3870	97	3640	114	121	20	94	5200	93	4240	94	3990	95	3750	95	3520	113	120						
25	97	5660	97	4630	97	4360	98	4100	98	3850	114	121	25	95	5480	95	4470	96	4220	96	3970	97	3720	113	120						
30	99	6010	98	4910	99	4640	100	4370	100	4100	115	121	30	97	5820	97	4750	97	4480	98	4220	99	3960	114	120						
35	101	6470	101	5300																											



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
2000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS							
VENR = 129 KIAS								VENR = 127 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-25	93 4420	93 3550	93 3280	93 3020	93 2770	111 120		-25	93 4410	93 3550	93 3280	93 3020	93 2770	110 119	
-20	93 4490	93 3610	93 3340	93 3080	93 2830	111 120		-20	93 4480	93 3610	93 3340	93 3080	93 2830	110 119	
-15	93 4560	93 3670	93 3400	93 3140	93 2880	111 120		-15	93 4550	93 3670	93 3400	93 3140	93 2890	110 119	
-10	93 4630	93 3740	93 3460	93 3190	93 2940	111 120		-10	93 4620	93 3740	93 3460	93 3200	93 2940	110 119	
-5	93 4700	93 3800	93 3520	93 3250	93 3000	111 120		-5	93 4690	93 3800	93 3520	93 3260	93 3000	110 119	
0	93 4770	93 3870	93 3580	93 3310	93 3050	111 120		0	93 4760	93 3860	93 3580	93 3310	93 3050	110 119	
5	93 4840	93 3930	93 3650	93 3370	93 3110	111 120		5	93 4830	93 3930	93 3650	93 3370	93 3110	110 119	
10	93 4910	93 3990	93 3710	93 3430	93 3170	111 120		10	93 4900	93 3990	93 3710	93 3430	93 3170	110 119	
15	92 4910	92 3990	92 3700	92 3420	92 3200	111 119		15	92 4900	92 3980	92 3700	92 3420	92 3160	109 118	
20	91 4910	91 3990	91 3750	92 3530	93 3300	111 118		20	90 4860	90 3940	90 3660	90 3390	90 3120	109 117	
25	92 5140	92 4180	93 3940	93 3700	94 3470	111 118		25	89 4790	89 3880	89 3640	90 3410	90 3200	108 116	
30	94 5450	94 4440	94 4180	95 3930	96 3680	111 118		30	90 5010	90 4060	90 3820	91 3590	92 3360	108 115	
35	97 5860	96 4770	97 4500	97 4230	98 3980	112 118		35	92 5380	92 4370	93 4110	93 3860	94 3620	109 115	
40	99 6350	99 5180	99 4890	100 4610	100 4330	113 118		40	95 5820	95 4730	95 4460	96 4190	96 3930	110 115	
45	102 6930	101 5660	102 5340	102 5030	103 4730	114 118		45	98 6340	97 5160	98 4860	98 4570	99 4290	111 115	
50	105 7570	104 6180	104 5830	104 5500	105 5180	115 118		50	101 6910	100 5620	100 5300	101 4990	101 4690	112 115	

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS							
VENR = 126 KIAS								VENR = 122 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-25	93 4410	93 3550	93 3290	93 3030	93 2780	108 118		-25	93 4420	93 3560	93 3300	93 3040	93 2800	106 117	
-20	93 4480	93 3610	93 3340	93 3090	93 2840	108 118		-20	93 4490	93 3630	93 3360	93 3100	93 2850	106 117	
-15	93 4550	93 3680	93 3410	93 3140	93 2890	108 118		-15	93 4550	93 3690	93 3420	93 3160	93 2910	106 117	
-10	93 4620	93 3740	93 3470	93 3200	93 2950	108 118		-10	93 4620	93 3750	93 3480	93 3220	93 2970	106 117	
-5	93 4690	93 3800	93 3530	93 3260	93 3010	108 118		-5	93 4690	93 3810	93 3540	93 3280	93 3020	106 117	
0	93 4760	93 3870	93 3590	93 3320	93 3060	108 118		0	93 4760	93 3880	93 3600	93 3330	93 3080	106 117	
5	93 4830	93 3930	93 3650	93 3380	93 3120	108 118		5	93 4840	93 3940	93 3660	93 3390	93 3140	106 117	
10	93 4900	93 3990	93 3710	93 3440	93 3180	108 118		10	93 4900	93 4000	93 3720	93 3450	93 3190	106 117	
15	92 4890	92 3980	92 3700	92 3430	92 3160	108 117		15	92 4890	92 3990	92 3710	92 3440	92 3180	106 116	
20	91 4850	91 3940	91 3660	91 3390	91 3130	107 116		20	91 4840	91 3940	91 3660	91 3390	91 3130	105 115	
25	89 4780	89 3870	89 3590	89 3320	89 3060	106 115		25	89 4770	89 3870	89 3590	89 3320	89 3060	105 114	
30	87 4700	87 3790	87 3520	88 3300	88 3090	106 113		30	87 4680	87 3790	87 3510	87 3240	87 2980	104 112	
35	88 4910	88 3970	89 3730	89 3500	90 3280	106 113		35	84 4560	84 3670	85 3420	85 3200	86 2990	103 110	
40	91 5310	90 4300	91 4050	92 3800	92 3560	107 113		40	86 4830	86 3900	87 3660	87 3430	88 3210	103 110	
45	94 5780	93 4680	94 4410	94 4140	95 3880	108 113		45	89 5250	89 4230	89 3980	90 3730	90 3490	104 110	
50	96 6280	96 5100	96 4800	96 4510	97 4230	108 113		50	92 5700	91 4600	92 4330	92 4060	93 3800	105 110	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 119 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-25	93 4430	93 3580	93 3320	93 3070	93 2820	104 116		-25	93 4460	93 3620	93 3350	93 3100	93 2850	103 114	
-20	93 4500	93 3650	93 3380	93 3120	93 2880	104 116		-20	93 4530	93 3680	93 3410	93 3150	93 2910	103 114	
-15	93 4570	93 3710	93 3440	93 3180	93 2930	105 116		-15	93 4600	93 3740	93 3470	93 3210	93 2960	103 115	
-10	93 4640	93 3770	93 3500	93 3240	93 2990	105 116		-10	93 4670	93 3800	93 3530	93 3270	93 3020	103 115	
-5	93 4710	93 3830	93 3560	93 3300	93 3040	105 116		-5	93 4740	93 3870	93 3590	93 3330	93 3080	103 115	
0	93 4780	93 3900	93 3620	93 3360	93 3100	105 116		0	93 4810	93 3930	93 3650	93 3390	93 3130	103 115	
5	93 4850	93 3960	93 3680	93 3420	93 3160	105 116		5	93 4880	93 3990	93 3720	93 3450	93 3190	103 115	
10	93 4920	93 4020	93 3740	93 3470	93 3210	105 116		10	93 4950	93 4060	93 3780	93 3510	93 3250	103 115	
15	92 4900	92 4010	92 3730	92 3460	92 3200	104 115		15	92 4930	92 4030	92 3760	92 3490	92 3230	102 114	
20	91 4850	91 3960	91 3680	91 3410	91 3150	104 114		20	91 4870	91 3980	91 3700	91 3430	91 3180	102 113	
25	89 4770	89 3880	89 3600	89 3330	89 3070	103 113		25	89 4780	89 3890	89 3620	89 3350	89 3090	101 111	
30	87 4670	87 3790	87 3510	87 3250	87 2990	102 111		30	87 4680	87 3800	87 3520	87 3260	87 3010	100 110	
35	85 4540	85 3660	85 3390	85 3130	85 2880	101 109		35	85 4540	85 3670	85 3400	85 3130	85 2880	99 108	
40	82 4420	82 3540	83 3320	83 3110	84 2900	100 107		40	82 4390	82 3530	82 3260	82 3000	82 2750	98 106	
45	84 4740	84 3810	85 3570	85 3350	86 3130	101 107		45	80 4290	80 3430	81 3210	81 3000	82 2800	97 104	
50	87 5140	87 4130	87 3880	88 3630	88 3400	102 107		50	82 4610	82 3690	83 3460	83 3230	84 3020	98 104	



Figure 7-2 (Sheet 6)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**3000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**TRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								VENR = 138 KIAS								WEIGHT = 12200 LBS								VENR = 137 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT						
-30	99	5080	99	4110	99	3860	100	3630	101	3390	118	125	-30	98	4950	97	4000	98	3760	99	3520	100	3300	117	124						
-25	99	5170	99	4190	99	3940	100	3700	101	3460	118	125	-25	98	5030	98	4080	98	3830	99	3600	100	3370	117	124						
-20	99	5250	99	4260	99	4010	100	3770	101	3530	118	125	-20	98	5110	97	4150	98	3900	99	3660	100	3430	117	124						
-15	99	5330	99	4340	99	4090	100	3840	101	3600	118	125	-15	98	5190	97	4220	98	3970	99	3730	99	3500	117	124						
-10	99	5410	99	4410	99	4160	100	3910	101	3670	118	125	-10	98	5270	97	4290	98	4040	99	3800	99	3560	117	124						
-5	99	5490	99	4480	99	4230	100	3980	101	3740	118	125	-5	98	5350	97	4360	98	4110	99	3870	99	3630	117	124						
0	99	5580	99	4570	99	4310	100	4050	101	3810	118	125	0	98	5440	97	4440	98	4190	99	3940	99	3700	117	124						
5	99	5730	99	4700	100	4430	100	4180	101	3920	118	125	5	98	5590	98	4570	99	4310	99	4060	100	3810	117	124						
10	100	5930	100	4860	101	4590	101	4320	102	4070	118	125	10	99	5780	99	4730	99	4470	100	4210	100	3950	117	124						
15	101	6170	101	5070	102	4790	102	4510	103	4250	119	125	15	100	6010	100	4930	100	4660	101	4390	101	4130	118	124						
20	103	6480	102	5330	103	5040	103	4750	104	4480	119	125	20	102	6310	101	5190	102	4900	102	4620	103	4350	118	124						
25	105	6840	104	5630	104	5330	105	5030	105	4740	120	125	25	103	6650	103	5480	103	5180	104	4890	104	4600	119	124						
30	106	7270	106	5990	106	5670	107	5360	107	5050	120	125	30	105	7070	104	5820	105	5510	105	5200	106	4900	119	124						
35	109	7980	108	6510	109	6160	109	5830	109	5500	121	125	35	108	7880	107	6330	107	5990	108	5660	108	5340	120	124						
40	108	9290	111	7120	111	6740	111	6380	112	6030	122	125	40	109	8700	109	6910	110	6550	110	6190	111	5850	121	124						
43	108	10250	112	7530	113	7140	113	6760	113	6380	122	125	44	108	9890	111	7440	112	7050	112	6670	112	6300	121	124						
44			113	7660	113	7260	113	6870	114	6500	122	125	45	108	10230	112	7570	112	7180	113	6790	113	6420	121	124						
													46			113	7710	113	7310	113	6920	113	6540	122	124						

WEIGHT = 12000 LBS								VENR = 136 KIAS								WEIGHT = 11800 LBS								VENR = 134 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT	KIAS	FT				
-30	96	4810	96	3880	97	3640	97	3410	98	3190	116	123	-30	95	4680	95	3770	95	3540	96	3310	97	3100	115	122						
-25	96	4890	96	3950	97	3710	97	3480	98	3260	116	123	-25	95	4760	95	3840	95	3610	96	3380	97	3160	115	122						
-20	96	4970	96	4020	97	3780	97	3550	98	3320	116	123	-20	95	4830	95	3910	95	3680	96	3450	97	3230	115	122						
-15	96	5040	96	4090	97	3850	97	3620	98	3390	116	123	-15	95	4910	95	3980	95	3740	96	3510	97	3290	115	122						
-10	96	5120	96	4160	97	3920	97	3680	98	3450	116	123	-10	95	4980	95	4050	95	3810	96	3580	97	3350	115	122						
-5	96	5200	96	4230	97	3990	97	3750	98	3520	116	123	-5	95	5060	95	4120	95	3870	96	3640	97	3410	115	122						
0	96	5280	96	4310	97	4060	97	3820	98	3580	116	123	0	95	5140	95	4190	95	3950	96	3710	97	3480	115	122						
5	97	5420	96	4430	97	4170	98	3930	98	3690	116	123	5	95	5270	95	4300	96	4050	96	3810	97	3580	115	122						
10	97	5600	97	4580	98	4320	98	4070	99	3830	116	123	10	96	5430	96	4440	96	4180	97	3940	98	3700	115	122						
15	99	5830	98	4780	99	4510	99	4250	100	3990	116	123	15	97	5650	97	4630	97	4370	98	4110	99	3860	115	122						
20	100	6120	100	5020	100	4740	101	4470	101	4210	117	123	20	98	5930	98	4860	99	4590	99	4320	100	4070	116	122						
25	102	6460	101	5310	102	5010	102	4730	103	4450	117	123	25	100	6260	100	5130	100	4850	101	4570	101	4300	116	122						
30	104	6860	103	5640	103	5330	104	5030	104	4740	118	123	30	102	6640	101	5450	102	5150	102	4860	103	4580	117	122						
35	105	7440	105	6120	106	5790	106	5470	107	5160	119	123	35	105	7200	104	5920	104	5600	105	5280	105	4980	118	122						
40	109	8120	108	6680	109	6330	109	5980	109	5640	119	123	40	108	7860	106	6460	107	6110	107	5780	108	5450	118	122						
45	109	9440	110	7320	111	6940	111	6560	111	6200	120	123	45	110	8670	109	7070	109	6700	110	6330	110	5980	119	122						
46	109	9740	111	7460	111	7070	112	6680	112	6310	120	123	47	110	9250	110	7340	110	6950	111	6570	111	6210	119	122						
47	109	10080	112	7590	112	7200	112	6810	112	6430	121	123	48	110	9880	111	7470	111	7080	111	6690	111	6320	120	122						

WEIGHT = 11600 LBS								VENR = 133 KIAS								WEIGHT = 11400 LBS								VENR = 132 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT	KIAS	FT				
-30	93	4550	93	3660	94	3440	95	3220	95	3010	114	121	-30	93	4490	93	3610	93	3340	93	3120	94	2920	113	121						
-25	93	4630	93	3730	94	3510	95	3280	95	3070	114	121	-25	93	4560	93	3670	93	3400	93	3190	94	2980	113	121						
-20	93	4700	93	3800	94	3570	95	3350	95	3130	114	121	-20	93	4630	93	3740	93	3470	93	3250	94	3040	113	121						
-15	93	4780	93	3870	94	3640	95	3410	95	3190	114	121	-15	93	4710	93	3800	93	3530	93	3310	94	3100	113	121						
-10	93	4850	93	3930	94	3700	95	3470	95	3250	114	121	-10	93	4780	93	3870	93	3600	93	3370	94	3160	113	121						
-5	93	4920	93	4000	94	3760	95	3530	95	3310	114	121	-5	93	4850	93	3930	93	3660	93	3430	94	3220	113	121						
0	93	5000	93	4070	94	3830	95	3600	95	3380	114	121	0	92	4920	92	3990	93	3730	93	3500	94	3280	113	121						
5	94	5120	94	4180	94	3930	95	3700	96	3470	114	121	5	92	4980	92	4060	93	3820	94	3590	94	3360	113	120						
10	94	5280	94	4310	95	4060	96	3820	96	3580	114	121	10	93	5130	93	4180	94	3940	94	3700	95	3470	113	120						
15	95	5480	95	4480	96	4220	96	3970	97	3730	114	121	15	94	5310	94	4330	94	4080	95	3840	96	3610	113	120						
20	97	5750	97																												



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
3000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS							
VENR = 130 KIAS								VENR = 126 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-30	93 4480	93 3600	93 3330	93 3070	93 2820	111 120		-30	93 4470	93 3600	93 3330	93 3070	93 2820	110 119	
-25	93 4550	93 3670	93 3390	93 3130	93 2870	111 120		-25	93 4540	93 3660	93 3390	93 3130	93 2880	110 119	
-20	93 4620	93 3730	93 3450	93 3190	93 2930	111 120		-20	93 4610	93 3730	93 3450	93 3190	93 2930	110 119	
-15	93 4690	93 3800	93 3520	93 3250	93 2990	111 120		-15	93 4680	93 3790	93 3520	93 3250	93 2990	110 119	
-10	93 4770	93 3860	93 3580	93 3310	93 3050	111 120		-10	93 4760	93 3860	93 3580	93 3310	93 3050	110 119	
-5	93 4840	93 3930	93 3640	93 3370	93 3110	111 120		-5	93 4830	93 3920	93 3640	93 3370	93 3110	110 119	
0	93 4910	93 3990	93 3700	93 3430	93 3160	111 120		0	93 4890	93 3980	93 3700	93 3430	93 3160	110 119	
5	92 4940	92 4010	92 3730	92 3450	92 3200	111 119		5	92 4920	92 4010	92 3720	92 3450	92 3180	110 118	
10	91 4950	91 4020	91 3730	92 3500	92 3280	111 119		10	91 4930	91 4010	91 3720	91 3450	91 3180	109 118	
15	91 5010	91 4080	92 3840	92 3610	93 3390	111 118		15	90 4910	90 3990	90 3700	90 3430	90 3160	109 117	
20	92 5220	92 4260	93 4010	93 3770	94 3540	111 118		20	89 4870	89 3950	89 3710	90 3480	90 3260	108 116	
25	94 5500	93 4490	94 4230	95 3980	95 3740	111 118		25	90 5060	90 4120	90 3870	91 3640	92 3410	108 115	
30	96 5820	95 4760	96 4490	96 4220	97 3970	112 118		30	91 5340	91 4350	92 4100	92 3850	93 3610	109 115	
35	98 6300	98 5150	98 4860	99 4580	99 4310	113 118		35	94 5770	94 4700	94 4430	95 4170	95 3910	110 115	
40	101 6860	100 5610	101 5300	101 5000	102 4700	114 118		40	97 6280	96 5120	97 4830	97 4540	98 4270	110 115	
45	104 7490	103 6130	103 5790	104 5460	104 5140	114 118		45	100 6840	99 5580	99 5270	100 4960	100 4660	111 115	
48	106 7900	104 6470	105 6110	105 5770	105 5440	115 118		48	101 7210	100 5880	101 5550	101 5230	101 4920	112 115	

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS							
VENR = 125 KIAS								VENR = 122 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-30	93 4470	93 3610	93 3340	93 3080	93 2830	108 118		-30	93 4480	93 3620	93 3350	93 3100	93 2850	106 117	
-25	93 4540	93 3670	93 3400	93 3140	93 2890	108 118		-25	93 4550	93 3680	93 3410	93 3150	93 2900	106 117	
-20	93 4610	93 3730	93 3460	93 3200	93 2940	108 118		-20	93 4620	93 3740	93 3470	93 3210	93 2960	106 117	
-15	93 4680	93 3800	93 3520	93 3260	93 3000	108 118		-15	93 4690	93 3810	93 3530	93 3270	93 3020	106 117	
-10	93 4750	93 3860	93 3580	93 3320	93 3060	108 118		-10	93 4760	93 3870	93 3600	93 3330	93 3070	106 117	
-5	93 4820	93 3930	93 3650	93 3380	93 3120	108 118		-5	93 4830	93 3940	93 3660	93 3390	93 3130	106 117	
0	93 4890	93 3990	93 3700	93 3430	93 3170	108 118		0	93 4900	93 4000	93 3710	93 3440	93 3180	106 117	
5	92 4920	92 4010	92 3730	92 3450	92 3190	108 117		5	92 4920	92 4020	92 3740	92 3460	92 3200	106 116	
10	91 4920	91 4010	91 3730	91 3450	91 3190	108 117		10	91 4920	91 4010	91 3730	91 3460	91 3200	106 116	
15	90 4900	90 3990	90 3700	90 3430	90 3160	107 116		15	90 4890	90 3990	90 3710	90 3430	90 3170	105 115	
20	89 4850	89 3940	89 3650	89 3380	89 3120	106 115		20	89 4840	89 3930	89 3650	89 3380	89 3120	105 114	
25	87 4790	87 3880	87 3600	87 3360	88 3140	106 114		25	87 4770	87 3870	87 3590	87 3320	87 3060	104 112	
30	87 4910	87 3980	88 3740	89 3510	89 3290	106 113		30	85 4700	85 3800	85 3520	85 3250	86 3030	103 111	
35	90 5280	90 4280	90 4030	91 3790	91 3550	106 113		35	85 4810	85 3890	86 3650	87 3430	87 3210	103 110	
40	93 5720	92 4650	93 4380	93 4110	94 3860	107 113		40	88 5210	88 4210	88 3960	89 3710	89 3470	104 110	
45	95 6230	95 5060	95 4770	96 4490	96 4210	108 113		45	91 5650	90 4570	91 4300	91 4040	92 3790	105 110	
48	97 6560	96 5330	97 5030	97 4730	97 4440	109 113		48	92 5940	92 4810	92 4530	93 4260	93 3990	105 110	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 119 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-30	93 4500	93 3640	93 3370	93 3120	93 2870	105 116		-30	93 4530	93 3670	93 3410	93 3150	93 2900	103 115	
-25	93 4560	93 3700	93 3430	93 3170	93 2920	105 116		-25	93 4590	93 3730	93 3460	93 3210	93 2960	103 115	
-20	93 4630	93 3760	93 3490	93 3230	93 2980	105 116		-20	93 4660	93 3800	93 3530	93 3260	93 3010	103 115	
-15	93 4700	93 3830	93 3550	93 3290	93 3040	105 116		-15	93 4730	93 3860	93 3590	93 3320	93 3070	103 115	
-10	93 4770	93 3890	93 3620	93 3350	93 3100	105 116		-10	93 4800	93 3920	93 3650	93 3380	93 3130	103 115	
-5	93 4850	93 3960	93 3680	93 3410	93 3150	105 116		-5	93 4880	93 3990	93 3710	93 3440	93 3190	103 115	
0	93 4910	93 4010	93 3740	93 3470	93 3210	105 116		0	93 4940	93 4050	93 3770	93 3500	93 3240	103 115	
5	92 4930	92 4040	92 3750	92 3480	92 3220	104 115		5	93 4960	93 4060	93 3780	93 3510	93 3250	102 114	
10	92 4930	92 4030	92 3750	92 3480	92 3220	104 115		10	92 4950	92 4060	92 3780	92 3510	92 3240	102 114	
15	90 4900	90 4000	90 3720	90 3450	90 3190	104 114		15	91 4920	91 4020	91 3740	91 3470	91 3210	102 113	
20	89 4840	89 3940	89 3660	89 3390	89 3130	103 113		20	89 4850	89 3960	89 3680	89 3410	89 3150	101 111	
25	87 4770	87 3870	87 3590	87 3330	87 3070	102 111		25	87 4770	87 3880	87 3610	87 3340	87 3080	100 110	
30	85 4680	85 3790	85 3520	85 3250	85 2990	101 110		30	85 4680	85 3800	85 3520	85 3260	85 3000	100 109	
35	83 4550	83 3660	83 3390	83 3130	84 2920	100 108		35	83 4530	83 3660	83 3380	83 3120	83 2870	98 107	
40	83 4700	83 3790	84 3560	85 3330	85 3110	100 107		40	80 4390	80 3520	80 3250	81 3010	81 2810	97 105	
45	86 5100	86 4110	86 3860	87 3620	87 3380	101 107		45	81 4580	81 3670	82 3440	82 3220	83 3000	98 104	
48	88 5360	87 4320	88 4060	88 3810	89 3560	102 107		48	83 4810	83 3860	83 3620	84 3390	84 3160	98 104	

Figure 7-2 (Sheet 8)



**TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)**

**FLAPS - UP  
4000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**NOTE: ALL CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

HEIGHT = 12375 LBS								VENR = 138 KIAS								HEIGHT = 12200 LBS								VENR = 137 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2						
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST				10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST								
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT					
-30	99	5230	99	4250	99	4000	100	3750	101	3520	118	125	-30	98	5090	97	4130	98	3890	99	3650	99	3420	117	124						
-25	99	5320	99	4330	99	4070	100	3830	101	3590	118	125	-25	98	5180	97	4210	98	3960	99	3720	99	3490	117	124						
-20	99	5410	99	4400	99	4150	100	3900	101	3660	118	125	-20	98	5270	97	4280	98	4040	99	3790	99	3560	117	124						
-15	99	5490	99	4480	99	4230	100	3980	101	3730	118	125	-15	98	5350	97	4360	98	4110	99	3860	99	3630	117	124						
-10	99	5580	99	4560	99	4300	100	4050	101	3800	118	125	-10	97	5430	97	4430	98	4180	99	3930	99	3690	117	124						
-5	99	5660	99	4630	99	4370	100	4120	101	3870	118	125	-5	97	5510	97	4510	98	4250	99	4000	99	3760	117	124						
0	99	5770	99	4730	99	4470	100	4210	101	3960	118	125	0	98	5620	97	4600	98	4340	99	4090	99	3850	117	124						
5	100	6000	100	4930	100	4650	101	4380	102	4130	118	125	5	99	5840	99	4790	99	4530	100	4270	100	4010	117	124						
10	102	6300	101	5180	102	4900	102	4620	103	4350	119	125	10	100	6140	100	5040	100	4760	101	4490	102	4230	118	124						
15	103	6620	103	5460	103	5160	104	4870	104	4590	119	125	15	102	6450	101	5310	102	5020	102	4730	103	4460	118	124						
20	105	6980	104	5740	104	5430	105	5130	105	4840	120	125	20	103	6780	103	5580	103	5280	104	4990	104	4700	119	124						
25	106	7320	105	6040	106	5720	106	5410	107	5100	120	125	25	105	7130	104	5880	104	5560	105	5250	105	4960	119	124						
30	107	7980	107	6480	108	6140	108	5810	109	5480	121	125	30	107	7630	106	6300	106	5960	107	5640	107	5320	120	124						
35	107	9180	110	7060	111	6690	111	6330	111	5990	121	125	35	107	8620	108	6860	109	6500	109	6150	110	5810	120	124						
40			112	7750	113	7350	113	6960	113	6580	122	125	40	107	10090	111	7520	111	7130	112	6750	112	6380	121	124						
41			113	7890	113	7480	114	7090	114	6700	122	125	41			112	7660	112	7270	112	6880	113	6500	121	124						
													43			113	7940	113	7530	113	7130	113	6740	122	124						

HEIGHT = 12000 LBS								VENR = 136 KIAS								HEIGHT = 11800 LBS								VENR = 135 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2						
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST				10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST								
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT					
-30	96	4950	96	4010	97	3770	97	3530	98	3310	116	123	-30	95	4820	95	3900	95	3660	96	3430	97	3210	115	122						
-25	96	5030	96	4080	97	3840	97	3610	98	3380	116	123	-25	95	4900	95	3970	95	3730	96	3500	97	3280	115	122						
-20	96	5110	96	4160	97	3910	97	3680	98	3450	116	123	-20	95	4980	95	4040	95	3800	96	3570	97	3340	115	122						
-15	96	5200	96	4230	97	3980	97	3750	98	3510	116	123	-15	95	5060	95	4110	95	3870	96	3640	97	3410	115	122						
-10	96	5280	96	4300	97	4060	97	3810	98	3580	116	123	-10	95	5130	95	4180	95	3940	96	3700	97	3480	115	122						
-5	96	5360	96	4380	97	4130	97	3880	98	3650	116	123	-5	95	5210	95	4250	95	4010	96	3770	97	3540	115	122						
0	96	5450	96	4460	97	4210	97	3960	98	3730	116	123	0	95	5310	95	4340	95	4090	96	3850	97	3620	115	122						
5	97	5660	97	4640	98	4380	98	4130	99	3880	116	123	5	96	5490	95	4490	96	4240	97	3990	97	3750	115	122						
10	99	5950	98	4880	99	4610	100	4350	100	4090	116	123	10	97	5770	97	4730	98	4470	98	4210	99	3950	115	122						
15	100	6250	100	5140	100	4860	101	4580	101	4310	117	123	15	99	6060	98	4970	99	4700	99	4430	100	4170	116	122						
20	102	6570	101	5400	102	5110	102	4820	103	4540	117	123	20	100	6360	100	5230	100	4940	101	4660	101	4390	116	122						
25	103	6910	103	5690	103	5380	103	5080	104	4790	118	123	25	102	6690	101	5500	102	5200	102	4910	103	4630	117	122						
30	105	7390	104	6090	105	5770	105	5450	106	5140	118	123	30	104	7160	103	5890	103	5580	104	5270	104	4970	117	122						
35	108	8040	107	6630	107	6280	108	5940	108	5610	119	123	35	106	7780	105	6410	106	6070	106	5740	107	5410	118	122						
40	108	9340	110	7270	110	6890	110	6520	111	6160	120	123	40	109	8610	108	7020	108	6650	109	6290	109	5940	119	122						
43	107	10290	111	7670	111	7270	112	6880	112	6510	120	123	44	108	9790	110	7550	110	7150	111	6770	111	6390	119	122						
44			112	7810	112	7410	112	7010	112	6630	121	123	45	108	10130	111	7680	111	7280	111	6890	111	6520	120	122						

HEIGHT = 11600 LBS								VENR = 133 KIAS								HEIGHT = 11400 LBS								VENR = 132 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2						
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST				10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST								
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT					
-30	93	4690	93	3790	94	3560	95	3330	95	3120	114	121	-30	93	4620	93	3730	93	3460	93	3240	94	3030	113	121						
-25	93	4770	93	3860	94	3630	95	3400	95	3180	114	121	-25	93	4700	93	3790	93	3520	93	3300	94	3090	113	121						
-20	93	4840	93	3930	94	3690	95	3470	95	3250	114	121	-20	93	4770	93	3860	93	3590	93	3370	94	3150	113	121						
-15	93	4920	93	4000	94	3760	95	3530	95	3310	114	121	-15	92	4840	92	3930	93	3660	93	3430	94	3210	113	121						
-10	93	5000	93	4070	94	3830	95	3600	95	3370	114	121	-10	92	4920	92	3990	93	3720	93	3500	94	3280	113	121						
-5	93	5070	93	4130	94	3890	95	3660	95	3430	114	121	-5	92	5000	92	4060	93	3790	93	3560	94	3340	113	121						
0	93	5160	93	4220	94	3970	95	3740	95	3510	114	121	0	92	5060	92	4120	93	3860	93	3630	94	3410	113	121						
5	94	5340	94	4370	95	4120	95	3870	96	3640	114	121	5	93	5190	93	4240	93	4000	94	3760	95	3530	113	120						
10	96	5590	95	4580	96	4320	97	4070	97	3820	114	121	10	94	5420	94	4430	94	4170	95	3930	96	3690	113	120						
15	97	5870	97	4820	97	4540	98	4280	98	4020	114	121	15	95	5690	95	4660	96	4390	96	4140	97	3890	113	120						
20	98	6160	98	5060	99	4780	99	4510	100	4240	115	121	20	97	5970	97	4890	97	4620	98	4350	98	4090	114	120						
25	100	6480	99	5320	100	5030	101	4750	101	4470	115	121	25	98	6270	98	5150	98	4860	99	4580	100	43								



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
4000 FEET

CONDITIONS: WET RUNWAY ANTI-ICE - OFF  
RUNWAY GRADIENT - ZERO SPEED BRAKES - RETRACT  
LANDING GEAR - DOWN INOPERATIVE ENGINE - WINDMILLING AFTER V1  
THRUST ATTENUATORS - AUTO OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS			
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT			
-30	93 4610	93 3720	93 3450	93 3180	93 2920	111 120	-30	93 4600	93 3720	93 3440	93 3180	93 2930	110 119		
-25	93 4680	93 3790	93 3510	93 3240	93 2980	111 120	-25	93 4670	93 3780	93 3510	93 3240	93 2980	110 119		
-20	93 4760	93 3850	93 3570	93 3300	93 3040	111 120	-20	93 4750	93 3850	93 3570	93 3300	93 3040	110 119		
-15	93 4830	93 3920	93 3640	93 3360	93 3100	111 120	-15	93 4820	93 3920	93 3630	93 3360	93 3100	110 119		
-10	93 4910	93 3990	93 3700	93 3430	93 3160	111 120	-10	93 4890	93 3980	93 3700	93 3430	93 3160	110 119		
-5	93 4980	93 4060	93 3770	93 3490	93 3220	111 120	-5	93 4970	93 4050	93 3770	93 3490	93 3220	110 119		
0	92 5040	92 4110	92 3820	92 3540	92 3270	111 120	0	92 5030	92 4100	92 3820	92 3540	92 3270	110 119		
5	91 5030	91 4100	91 3810	92 3560	92 3330	111 119	5	91 5020	91 4090	91 3800	91 3520	91 3260	109 118		
10	91 5110	91 4170	92 3930	92 3690	93 3470	111 118	10	90 4970	90 4040	90 3750	90 3480	90 3230	109 117		
15	92 5330	92 4350	93 4100	93 3860	94 3620	111 118	15	88 4940	89 4020	89 3790	90 3560	91 3340	108 116		
20	94 5590	93 4570	94 4310	95 4060	95 3810	111 118	20	90 5150	90 4190	90 3950	91 3710	91 3480	108 115		
25	95 5870	95 4800	95 4530	96 4270	96 4010	112 118	25	91 5380	91 4390	91 4140	92 3890	93 3650	109 115		
30	97 6270	97 5130	97 4850	98 4570	98 4300	112 118	30	93 5740	93 4690	93 4420	94 4160	94 3910	109 115		
35	100 6800	99 5580	100 5270	100 4970	101 4680	113 118	35	96 6220	95 5090	96 4800	96 4520	97 4250	110 115		
40	103 7420	102 6090	102 5760	103 5430	103 5120	114 118	40	99 6790	98 5550	98 5240	99 4940	99 4640	111 115		
45	106 8110	104 6650	105 6290	105 5940	105 5600	115 118	45	101 7400	100 6050	101 5720	101 5390	101 5070	112 115		
46	106 8260	105 6770	105 6410	105 6050	106 5710	115 118	46	102 7530	101 6160	101 5820	102 5490	102 5170	112 115		

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS			
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT			
-30	93 4600	93 3720	93 3450	93 3190	93 2940	108 118	-30	93 4610	93 3730	93 3460	93 3200	93 2950	106 117		
-25	93 4670	93 3790	93 3510	93 3250	93 2990	108 118	-25	93 4680	93 3800	93 3520	93 3260	93 3010	106 117		
-20	93 4740	93 3850	93 3580	93 3310	93 3050	108 118	-20	93 4750	93 3860	93 3590	93 3320	93 3070	106 117		
-15	93 4820	93 3920	93 3640	93 3370	93 3110	108 118	-15	93 4820	93 3930	93 3650	93 3380	93 3120	106 117		
-10	93 4890	93 3990	93 3700	93 3430	93 3170	108 118	-10	93 4900	93 4000	93 3720	93 3450	93 3180	106 117		
-5	93 4970	93 4050	93 3770	93 3500	93 3230	108 118	-5	93 4970	93 4060	93 3780	93 3510	93 3250	106 117		
0	93 5020	93 4110	93 3820	93 3540	93 3280	108 118	0	93 5030	93 4110	93 3830	93 3560	93 3290	106 117		
5	91 5010	91 4090	91 3800	91 3530	91 3260	108 117	5	92 5010	92 4100	92 3810	92 3540	92 3270	106 116		
10	90 4960	90 4040	90 3750	90 3480	90 3210	107 116	10	90 4950	90 4040	90 3750	90 3480	90 3220	105 115		
15	88 4910	88 3990	88 3700	88 3430	88 3160	106 115	15	89 4900	89 3990	89 3700	89 3430	89 3170	105 114		
20	87 4860	87 3940	87 3660	87 3400	88 3210	106 114	20	87 4850	87 3940	87 3650	87 3380	87 3120	104 112		
25	87 4960	87 4030	88 3790	88 3560	89 3340	106 113	25	86 4800	86 3890	86 3610	86 3330	86 3090	104 111		
30	89 5250	89 4270	89 4020	90 3780	90 3540	106 113	30	85 4810	85 3900	85 3640	86 3440	87 3220	103 110		
35	91 5680	91 4620	92 4360	92 4100	93 3840	107 113	35	87 5170	87 4190	87 3940	88 3700	89 3470	104 110		
40	94 6180	94 5040	94 4750	95 4470	95 4200	108 113	40	90 5610	89 4550	90 4290	90 4030	91 3770	104 110		
45	97 6730	96 5480	97 5170	97 4870	97 4580	109 113	45	93 6100	92 4950	92 4660	93 4380	93 4110	105 110		
46	98 6840	97 5580	97 5270	97 4960	98 4660	109 113	46	93 6200	92 5040	93 4740	93 4460	94 4190	105 110		

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS			
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT			
-30	93 4620	93 3760	93 3480	93 3220	93 2970	105 116	-30	93 4650	93 3790	93 3520	93 3260	93 3010	103 115		
-25	93 4690	93 3820	93 3550	93 3280	93 3030	105 116	-25	93 4720	93 3850	93 3580	93 3320	93 3060	103 115		
-20	93 4770	93 3880	93 3610	93 3340	93 3090	105 116	-20	93 4800	93 3920	93 3640	93 3380	93 3120	103 115		
-15	93 4840	93 3950	93 3670	93 3400	93 3150	105 116	-15	93 4870	93 3980	93 3700	93 3440	93 3180	103 115		
-10	93 4910	93 4020	93 3740	93 3470	93 3210	105 116	-10	93 4940	93 4050	93 3770	93 3500	93 3240	103 115		
-5	93 4990	93 4080	93 3800	93 3530	93 3270	105 116	-5	93 5020	93 4110	93 3830	93 3560	93 3300	103 115		
0	93 5040	93 4130	93 3850	93 3580	93 3310	105 116	0	93 5070	93 4160	93 3880	93 3610	93 3340	103 115		
5	92 5020	92 4110	92 3830	92 3550	92 3290	104 115	5	92 5040	92 4140	92 3850	92 3580	92 3320	102 114		
10	90 4950	90 4050	90 3770	90 3490	90 3230	103 114	10	90 4970	90 4070	90 3790	90 3520	90 3250	102 112		
15	89 4890	89 3990	89 3710	89 3440	89 3180	103 112	15	89 4900	89 4010	89 3730	89 3460	89 3190	101 111		
20	87 4840	87 3940	87 3660	87 3390	87 3120	102 111	20	87 4840	87 3950	87 3670	87 3400	87 3140	100 110		
25	86 4780	86 3880	86 3600	86 3330	86 3070	102 110	25	86 4780	86 3890	86 3610	86 3340	86 3080	100 109		
30	84 4680	84 3790	84 3510	84 3240	84 2980	101 109	30	84 4670	84 3780	84 3510	84 3240	84 2990	99 107		
35	83 4700	83 3790	83 3560	84 3340	85 3120	101 107	35	81 4530	81 3650	81 3370	81 3110	81 2860	98 105		
40	85 5070	85 4100	86 3850	86 3610	87 3380	101 107	40	80 4570	80 3670	81 3450	82 3220	82 3010	97 104		
45	88 5500	87 4440	88 4180	88 3920	89 3670	102 107	45	83 4930	83 3970	83 3730	84 3490	84 3260	98 104		
46	88 5590	88 4520	88 4250	89 3990	89 3740	102 107	46	84 5020	83 4040	84 3790	84 3550	85 3310	98 104		

Figure 7-2 (Sheet10)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**5000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS										WEIGHT = 12200 LBS																																																																																																																																																																																																																														
		VENR = 138 KIAS										VENR = 137 KIAS																																																																																																																																																																																																																												
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS																																																																																																																																																																																																																					
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT																																																																																																																																																																																																																									
			-35	99 5290	99 4300	99 4050	100 3800	101 3570					118 125	-35	97 5150	97 4180	98 3940	99 3700		99 3460	117 124	-30	99 5380	99 4390	99 4130	100 3880	101 3640	118 125	-30	97 5240	97 4270	98 4020	99 3770	99 3530	117 124	-25	99 5480	99 4470	99 4210	100 3960	101 3720	118 125	-25	97 5330	97 4350	98 4090	99 3850	99 3610	117 124	-20	99 5560	99 4550	99 4290	100 4040	101 3790	118 125	-20	97 5420	97 4430	98 4170	99 3920	99 3690	117 124	-15	99 5650	99 4630	99 4370	100 4110	101 3870	118 125	-15	97 5510	97 4500	98 4250	99 4000	99 3760	117 124	-10	99 5790	99 4750	100 4490	100 4230	101 3980	118 125	-10	98 5640	98 4620	98 4360	99 4110	100 3860	117 124	-5	100 5940	99 4880	100 4610	101 4350	101 4080	118 125	-5	98 5780	98 4750	99 4480	99 4220	100 3970	117 124	0	100 6130	100 5050	101 4770	101 4500	102 4240	118 125	0	99 5980	99 4910	99 4640	100 4370	101 4120	117 124	5	102 6440	101 5300	102 5010	102 4730	103 4460	119 125	5	100 6270	100 5160	101 4870	101 4600	102 4330	118 124	10	103 6770	103 5580	103 5280	104 4990	104 4710	119 125	10	102 6590	101 5430	102 5140	103 4850	103 4570	118 124	15	105 7120	104 5880	105 5570	105 5260	106 4960	120 125	15	103 6930	103 5720	103 5410	104 5110	104 4820	119 124	20	106 7460	105 6160	106 5840	106 5520	107 5210	120 125	20	106 7250	104 5990	104 5670	105 5360	105 5060	119 124	25	106 7960	107 6470	107 6130	107 5800	108 5480	120 125	25	106 7600	105 6290	106 5960	106 5630	107 5320	119 124	30	106 9120	109 7020	109 6660	110 6310	110 5960	121 125	30	106 8560	108 6820	108 6470	108 6120	109 5790	120 124	35	111 7680	112 7290	112 6900	112 6530	122 125	35	106 9950	110 7450	110 7070	111 6700	111 6330	121 124	37	112 7970	113 7560	113 7170	113 6780	122 125	38	112 7890	112 7480	112 7090	113 6710	121 124	38	113 8120	113 7710	114 7310

WEIGHT = 12000 LBS										WEIGHT = 11800 LBS																																																																																																																																																																																																																																														
		VENR = 136 KIAS										VENR = 135 KIAS																																																																																																																																																																																																																																												
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS																																																																																																																																																																																																																																					
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT																																																																																																																																																																																																																																									
			-35	96 5010	96 4060	97 3820	97 3590	98 3360					116 123	-35	95 4870	95 3950	95 3710	96 3480		97 3260	115 122	-30	96 5100	96 4140	97 3900	97 3660	98 3430	116 123	-30	95 4960	95 4030	95 3790	96 3560	97 3330	115 122	-25	96 5180	96 4220	97 3970	97 3730	98 3500	116 123	-25	95 5040	95 4100	95 3860	96 3630	97 3400	115 122	-20	96 5270	96 4300	97 4050	97 3810	98 3570	116 123	-20	95 5130	95 4180	95 3930	96 3700	97 3470	115 122	-15	96 5350	96 4370	97 4120	97 3880	98 3640	116 123	-15	95 5210	95 4250	95 4010	96 3770	97 3540	115 122	-10	96 5480	96 4480	97 4230	97 3980	98 3740	116 123	-10	95 5330	95 4360	96 4110	96 3860	97 3630	115 122	-5	97 5610	97 4600	97 4340	98 4090	98 3840	116 123	-5	95 5450	95 4460	96 4210	96 3960	97 3720	115 122	0	97 5800	97 4760	98 4490	99 4240	99 3990	116 123	0	96 5620	96 4610	96 4350	97 4100	98 3850	115 122	5	99 6080	99 4990	99 4720	100 4450	100 4190	116 123	5	97 5890	97 4840	98 4570	98 4310	99 4050	115 122	10	100 6390	100 5260	101 4970	101 4690	102 4420	117 123	10	99 6190	98 5090	99 4810	100 4540	100 4270	116 122	15	102 6720	101 5540	102 5240	102 4940	103 4660	117 123	15	100 6510	100 5360	100 5060	101 4780	101 4500	116 122	20	103 7030	103 5800	103 5490	104 5190	104 4890	118 123	20	102 6810	101 5610	102 5310	102 5010	103 4730	117 122	25	104 7360	104 6080	104 5760	105 5450	105 5140	118 123	25	103 7130	102 5890	103 5570	103 5260	104 4970	117 122	30	107 7980	106 6600	107 6250	107 5920	107 5590	119 123	30	105 7730	105 6380	105 6040	105 5720	106 5390	118 122	35	107 9230	109 7210	109 6830	109 6470	110 6110	120 123	35	108 8540	107 6960	107 6600	108 6240	108 5900	119 122	39	111 7760	111 7370	111 6980	111 6620	112 6260	120 123	40	107 10030	110 7630	110 7240	110 6860	111 6480	119 122	40	111 7900	111 7500	112 7100	112 6720	120 123	41	110 7770	110 7370	110 6980	111 6600	111 6220	119 122	41	112 8040	112 7630	112 7230

WEIGHT = 11600 LBS										WEIGHT = 11400 LBS																																																																																																																																																																																																																																																	
		VENR = 133 KIAS										VENR = 132 KIAS																																																																																																																																																																																																																																															
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS																																																																																																																																																																																																																																								
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT																																																																																																																																																																																																																																												
			-35	93 4740	93 3840	94 3610	95 3380	95 3160					114 121	-35	93 4690	93 3790	93 3510	93 3290		94 3070	113 121	-30	93 4830	93 3910	94 3680	95 3450	95 3230	114 121	-30	93 4760	93 3850	93 3580	93 3360	94 3140	113 121	-25	93 4910	93 3990	94 3750	95 3520	95 3300	114 121	-25	93 4840	93 3920	93 3650	93 3420	94 3210	113 121	-20	93 4990	93 4060	94 3820	95 3590	95 3370	114 121	-20	92 4920	92 3990	93 3720	93 3490	94 3270	113 121	-15	93 5070	93 4130	94 3890	95 3660	95 3430	114 121	-15	92 4990	92 4060	93 3790	93 3560	94 3340	113 121	-10	93 5180	94 4230	94 3990	95 3750	96 3520	114 121	-10	92 5040	92 4110	93 3870	94 3640	94 3420	113 121	-5	94 5300	94 4330	94 4090	95 3850	96 3610	114 121	-5	92 5150	92 4210	93 3970	94 3730	94 3500	113 120	0	94 5460	94 4470	95 4220	96 3970	96 3730	114 121	0	93 5310	93 4340	94 4090	94 3850	95 3620	113 120	5	96 5710	96 4680	96 4420	97 4160	97 3920	114 121	5	94 5530	94 4530	95 4270	95 4020	96 3780	113 120	10	97 6000	97 4920	98 4650	98 4380	99 4120	115 121	10	96 5810	95 4770	96 4500	97 4240	97 3980	113 120	15	99 6300	98 5180	99 4900	99 4620	100 4350	115 121	15	97 6100	97 5010	97 4730	98 4460	98 4200	114 120	20	100 6590	99 5430	100 5130	101 4840	101 4560	115 121	20	98 6380	98 5250	98 4960	99 4680	100 4400	114 120	25	101 6900	101 5690	101 5380	102 5080	102 4790	116 121	25	100 6680	99 5500	100 5200	100 4910	101 4630	115 120	30	104 7480	103 6170	103 5840	104 5520	104 5210	117 121	30	102 7230	102 5960	102 5640	102 5330	103 5020	115 120	35	107 8150	106 6730	106 6370	106 6030	107 5690	117 121	35	105 7880	104 6490	104 6150	105 5810	105 5480	116 120	40	108 9220	108 7370	108 6980	109 6610	109 6250	118 121	40	108 8630	107 7110	107 6730	107 6370	108 6020	117 120	42	108 9820	109 7640	109 7240	110 6850	110 6480	118 121	43	109 9300	108 7510	108 7110	109 6730	109 6360	117 120	43	108 10160	110 7780	110 7370	110 6980	110 6600

Figure 7-2 (Sheet 11)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
5000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS							
VENR = 130 KIAS								VENR = 126 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 4680	93 3780	93 3500	93 3230	93 2980	111 120		-35	93 4670	93 3780	93 3500	93 3230	93 2980	110 119	
-30	93 4750	93 3850	93 3570	93 3290	93 3030	111 120		-30	93 4740	93 3840	93 3560	93 3300	93 3040	110 119	
-25	93 4830	93 3910	93 3630	93 3360	93 3090	111 120		-25	93 4810	93 3910	93 3630	93 3360	93 3100	110 119	
-20	93 4900	93 3980	93 3700	93 3420	93 3160	111 120		-20	93 4890	93 3980	93 3700	93 3420	93 3160	110 119	
-15	93 4980	93 4050	93 3760	93 3490	93 3220	111 120		-15	93 4970	93 4050	93 3760	93 3490	93 3220	110 119	
-10	92 5020	92 4090	92 3800	92 3520	92 3250	111 120		-10	92 5010	92 4090	92 3800	92 3520	92 3250	110 119	
-5	92 5070	92 4130	92 3840	92 3560	92 3330	111 119		-5	92 5050	92 4120	92 3830	92 3550	92 3290	110 118	
0	91 5080	91 4140	91 3860	92 3630	92 3410	111 119		0	91 5070	91 4130	91 3840	91 3560	91 3290	109 118	
5	91 5210	91 4260	92 4010	93 3780	93 3550	111 118		5	90 5030	90 4100	90 3810	90 3530	90 3300	109 117	
10	92 5440	92 4450	93 4190	94 3950	94 3710	111 118		10	89 5040	89 4110	89 3870	90 3640	91 3410	108 116	
15	94 5710	94 4680	94 4420	95 4160	95 3900	111 118		15	90 5260	90 4290	90 4040	91 3800	92 3570	108 115	
20	95 5970	95 4900	95 4620	96 4350	96 4100	112 118		20	91 5480	91 4480	91 4220	92 3970	93 3730	109 115	
25	96 6250	96 5130	97 4850	97 4570	98 4300	112 118		25	92 5740	92 4690	93 4420	93 4160	94 3910	109 115	
30	99 6760	98 5550	99 5250	99 4950	100 4660	113 118		30	95 6190	94 5070	95 4780	95 4510	96 4240	110 115	
35	102 7350	101 6040	101 5720	102 5400	102 5090	114 118		35	98 6720	97 5510	97 5210	98 4910	98 4620	111 115	
40	105 8040	103 6610	104 6250	104 5910	105 5580	115 118		40	100 7340	99 6010	100 5690	100 5360	101 5050	111 115	
44	107 8640	105 7100	106 6720	106 6360	106 6000	115 118		44	103 7870	101 6450	102 6100	102 5760	102 5430	112 115	

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS							
VENR = 124 KIAS								VENR = 121 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 4660	93 3780	93 3510	93 3240	93 2990	108 118		-35	93 4670	93 3790	93 3520	93 3260	93 3000	106 117	
-30	93 4740	93 3850	93 3570	93 3300	93 3050	108 118		-30	93 4740	93 3860	93 3580	93 3320	93 3060	106 117	
-25	93 4810	93 3910	93 3630	93 3360	93 3110	108 118		-25	93 4820	93 3920	93 3650	93 3380	93 3120	106 117	
-20	93 4890	93 3980	93 3700	93 3430	93 3170	108 118		-20	93 4890	93 3990	93 3710	93 3440	93 3180	106 117	
-15	93 4960	93 4050	93 3770	93 3490	93 3230	108 118		-15	93 4970	93 4060	93 3780	93 3500	93 3240	106 117	
-10	92 5000	92 4090	92 3800	92 3530	92 3260	108 118		-10	92 5010	92 4100	92 3810	92 3540	92 3270	106 117	
-5	92 5040	92 4120	92 3840	92 3560	92 3290	108 117		-5	92 5050	92 4130	92 3840	92 3570	92 3300	106 116	
0	91 5050	91 4130	91 3840	91 3560	91 3300	108 117		0	91 5050	91 4130	91 3850	91 3570	91 3300	106 116	
5	90 5010	90 4090	90 3800	90 3520	90 3260	107 116		5	90 5010	90 4090	90 3800	90 3530	90 3260	105 115	
10	88 4970	88 4040	88 3750	88 3480	88 3210	106 114		10	88 4950	88 4040	88 3750	88 3480	88 3210	105 113	
15	87 4920	87 4000	87 3730	88 3500	88 3280	106 113		15	87 4900	87 3990	87 3700	87 3430	87 3160	104 112	
20	87 5040	87 4110	88 3870	88 3630	89 3410	106 113		20	85 4870	85 3950	85 3670	85 3390	86 3150	104 111	
25	88 5240	88 4270	89 4020	89 3780	90 3550	106 113		25	84 4830	84 3920	85 3690	85 3460	86 3240	103 110	
30	91 5650	90 4610	91 4340	91 4090	92 3840	107 113		30	86 5140	86 4170	87 3930	87 3690	88 3460	103 110	
35	93 6130	93 5000	93 4720	94 4440	94 4180	107 113		35	89 5570	88 4530	89 4260	90 4010	90 3760	104 110	
40	96 6680	95 5450	96 5150	96 4850	97 4560	108 113		40	92 6050	91 4930	91 4640	92 4370	92 4100	105 110	
44	98 7150	97 5850	98 5520	98 5200	98 4900	109 113		44	94 6480	93 5270	93 4970	94 4680	94 4400	106 110	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 119 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 4690	93 3810	93 3540	93 3280	93 3030	105 116		-35	93 4720	93 3840	93 3570	93 3310	93 3060	103 115	
-30	93 4760	93 3880	93 3600	93 3340	93 3080	105 116		-30	93 4790	93 3910	93 3630	93 3370	93 3120	103 115	
-25	93 4830	93 3940	93 3670	93 3400	93 3140	105 116		-25	93 4860	93 3980	93 3700	93 3430	93 3170	103 115	
-20	93 4910	93 4010	93 3730	93 3460	93 3200	105 116		-20	93 4940	93 4040	93 3760	93 3500	93 3240	103 115	
-15	93 4980	93 4080	93 3800	93 3530	93 3260	105 116		-15	93 5010	93 4110	93 3830	93 3560	93 3300	103 115	
-10	93 5020	93 4110	93 3830	93 3560	93 3290	105 116		-10	93 5050	93 4140	93 3860	93 3590	93 3320	103 114	
-5	92 5060	92 4150	92 3860	92 3590	92 3320	104 115		-5	92 5080	92 4170	92 3890	92 3620	92 3350	102 114	
0	91 5060	91 4150	91 3860	91 3590	91 3320	104 115		0	91 5080	91 4170	91 3890	91 3610	91 3350	102 113	
5	90 5010	90 4100	90 3810	90 3540	90 3280	103 113		5	90 5030	90 4120	90 3840	90 3560	90 3300	101 112	
10	88 4950	88 4040	88 3760	88 3480	88 3220	103 112		10	88 4960	88 4050	88 3770	88 3500	88 3240	101 111	
15	87 4890	87 3990	87 3700	87 3430	87 3170	102 111		15	87 4900	87 3990	87 3710	87 3440	87 3180	100 110	
20	86 4860	86 3950	86 3670	86 3390	86 3130	102 110		20	86 4850	86 3950	86 3670	86 3400	86 3140	100 109	
25	84 4820	84 3910	84 3630	84 3350	84 3090	101 109		25	84 4810	84 3910	84 3630	84 3360	84 3100	99 108	
30	82 4700	82 3800	83 3570	83 3350	84 3140	100 107		30	82 4670	82 3770	82 3500	82 3230	82 2970	98 106	
35	84 5030	84 4070	85 3830	85 3590	86 3370	101 107		35	80 4560	80 3680	80 3450	81 3230	82 3020	97 104	
40	87 5460	87 4430	87 4160	88 3910	88 3660	101 107		40	82 4900	82 3950	82 3710	83 3480	84 3250	98 104	
44	89 5840	88 4730	89 4460	89 4190	90 3920	102 107		44	84 5230	84 4220	84 3970	85 3720	85 3480	98 104	

Figure 7-2 (Sheet 12)



TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
6000 FEET

CONDITIONS: WET RUNWAY ANTI-ICE - OFF  
RUNWAY GRADIENT - ZERO SPEED BRAKES - RETRACT  
LANDING GEAR - DOWN INOPERATIVE ENGINE - WINDMILLING AFTER V1  
THRUST ATTENUATORS - AUTO OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

HEIGHT = 12375 LBS								VENR = 139 KIAS								HEIGHT = 12200 LBS								VENR = 137 KIAS							
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2								
		V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS				V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS				V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS									
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS								
-35	99	5450	99	4440	99	4190	100	3940	100	3700	118	125	-35	97	5310	97	4320	98	4070	99	3830	99	3590	117	124						
-30	99	5550	99	4530	99	4270	100	4020	101	3780	118	125	-30	97	5400	97	4410	98	4150	99	3910	99	3670	117	124						
-25	99	5640	99	4620	99	4360	100	4100	100	3860	118	125	-25	97	5490	97	4490	98	4230	99	3990	99	3740	117	124						
-20	99	5730	99	4700	99	4440	100	4180	100	3930	118	125	-20	97	5580	97	4570	98	4320	99	4060	99	3820	117	124						
-15	99	5850	99	4810	99	4540	100	4280	101	4030	118	125	-15	98	5700	97	4680	98	4410	99	4160	99	3910	117	124						
-10	99	6010	99	4950	100	4680	100	4410	101	4150	118	125	-10	98	5850	98	4810	99	4550	99	4290	100	4030	117	124						
-5	100	6230	100	5130	101	4850	101	4580	102	4320	118	125	-5	99	6070	99	5000	99	4730	100	4450	100	4190	117	124						
0	102	6570	102	5420	102	5130	103	4840	103	4550	119	125	0	101	6390	100	5270	101	4980	101	4710	102	4430	118	124						
5	104	6920	103	5710	103	5410	104	5110	105	4820	119	125	5	102	6730	102	5560	102	5260	103	4970	103	4680	118	124						
10	105	7280	104	6020	105	5700	105	5390	106	5090	120	125	10	104	7090	103	5860	104	5540	104	5240	105	4950	119	124						
15	105	7710	106	6340	106	6010	107	5680	107	5370	120	125	15	105	7450	104	6160	105	5840	105	5520	106	5210	119	124						
20	105	8360	107	6660	107	6310	108	5980	108	5650	120	125	20	106	7870	106	6470	106	6130	106	5800	107	5480	119	124						
25	104	9220	108	7070	109	6710	109	6360	110	6010	121	125	25	105	8690	107	6870	108	6520	108	6170	108	5840	120	124						
30			111	7580	111	7230	111	6910	112	6540	122	125	30	104	9960	109	7460	110	7080	110	6710	110	6340	121	124						
33			112	8090	112	7680	113	7280	113	6900	122	125	35			112	8130	112	7720	112	7320	113	6930	121	124						
35			113	8380	113	7960	114	7550	114	7150	122	125	36			112	8280	113	7860	113	7460	113	7060	122	124						

HEIGHT = 12000 LBS								VENR = 136 KIAS								HEIGHT = 11800 LBS								VENR = 135 KIAS							
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2								
		V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS				V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS				V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS									
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS								
-35	96	5160	96	4200	97	3950	97	3710	98	3480	116	123	-35	95	5020	95	4080	95	3840	96	3610	97	3380	115	122						
-30	96	5250	96	4280	97	4030	97	3790	98	3560	116	123	-30	95	5110	95	4160	95	3920	96	3680	97	3460	115	122						
-25	96	5340	96	4360	97	4110	97	3870	98	3630	116	123	-25	95	5200	95	4240	95	4000	96	3760	97	3530	115	122						
-20	96	5430	96	4440	97	4190	97	3940	98	3710	116	123	-20	95	5280	95	4320	95	4070	96	3830	97	3600	115	122						
-15	96	5540	96	4540	97	4280	97	4030	98	3790	116	123	-15	95	5390	95	4410	95	4160	96	3920	97	3680	115	122						
-10	96	5680	96	4660	97	4400	98	4150	98	3900	116	123	-10	95	5520	95	4530	96	4270	96	4030	97	3780	115	122						
-5	97	5890	97	4840	98	4570	98	4310	99	4060	116	123	-5	96	5710	96	4690	96	4420	97	4170	98	3920	115	122						
0	99	6200	99	5100	99	4820	100	4550	100	4290	117	123	0	97	6010	97	4940	98	4670	98	4400	99	4140	115	122						
5	101	6530	100	5380	101	5090	101	4810	102	4530	117	123	5	99	6320	99	5210	99	4920	100	4650	100	4380	116	122						
10	102	6870	102	5670	102	5360	103	5070	103	4780	117	123	10	101	6650	100	5480	101	5190	101	4900	102	4620	116	122						
15	104	7210	103	5960	103	5650	104	5340	104	5040	118	123	15	102	6990	101	5770	102	5460	102	5160	103	4870	117	122						
20	105	7570	104	6260	104	5930	105	5610	105	5300	118	123	20	103	7330	103	6050	103	5730	103	5420	104	5120	117	122						
25	106	8100	106	6650	106	6300	106	5960	107	5640	119	123	25	105	7770	104	6430	105	6090	105	5760	105	5440	118	122						
30	105	9260	108	7210	108	6840	109	6480	109	6120	120	123	30	106	8580	106	6970	107	6600	107	6250	108	5910	118	122						
35			110	7860	111	7460	111	7070	111	6690	120	123	35	106	9960	109	7590	109	7200	109	6820	110	6460	119	122						
36			111	8000	111	7590	111	7200	112	6810	120	123	37			110	7870	110	7470	110	7080	111	6690	119	122						
37			111	8150	112	7730	112	7330	112	6940	121	123	39			111	8150	111	7740	111	7340	112	6940	120	122						

HEIGHT = 11600 LBS								VENR = 134 KIAS								HEIGHT = 11400 LBS								VENR = 132 KIAS							
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND		HEADWINDS			VR V2								
		V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS				V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS				V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS									
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS								
-35	93	4890	93	3970	94	3730	95	3500	95	3280	114	121	-35	93	4830	93	3910	93	3640	93	3410	94	3190	113	121						
-30	93	4970	93	4050	94	3810	95	3580	95	3350	114	121	-30	93	4910	93	3980	93	3710	93	3480	94	3260	113	121						
-25	93	5060	93	4120	94	3880	95	3650	95	3420	114	121	-25	92	4990	92	4050	93	3780	93	3550	94	3330	113	121						
-20	93	5140	93	4200	94	3960	95	3720	95	3490	114	121	-20	92	5070	92	4130	93	3850	93	3620	94	3400	113	121						
-15	93	5240	93	4290	94	4040	95	3800	95	3570	114	121	-15	92	5130	92	4180	93	3930	93	3700	94	3470	113	121						
-10	94	5370	94	4400	94	4150	95	3910	96	3670	114	121	-10	92	5230	92	4270	93	4030	94	3790	94	3560	113	120						
-5	94	5540	94	4550	95	4290	96	4040	96	3800	114	121	-5	93	5390	93	4420	94	4170	94	3920	95	3690	113	120						
0	96	5820	96	4780	96	4520	97	4260	98	4010	114	121	0	94	5640	94	4620	95	4370	95	4110	96	3870	113	120						
5	97	6130	97	5040	98	4760	98	4490	99	4230	115	121	5	96	5940	96	4880	96	4610	97	4340	97	4080	113	120						
10	99	6440	99	5300	99	5010	100	4730	100	4460	115	121	10	97	6240	97	5130	98	4850	98	4570	99	4300	114	120						
15	100	6760	100	5580	100	5280	101	4980	101	4700	116	121	15	99	6550	98	5390	99	5100	99	4810	100	4530	114	120						
20	102	7090	101	5850	101	5540	102	5240	102	4940	116	121	20	100	6860	99	5660	100	5350	100	5050	101	4770	115	120						
25	103	7520	103	6210	103	5880	103	5560	104	5250	116	121	25	102	7270	101	6000	102	5680	102	5370	102	5070	115	120						
30	106	8140	105	6730	105	6380	106	6030	106	5700	117	121	30	104	7870	103	6500	104	6150	104	5820	105	5500								



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
6000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS				
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT				
-35	93 4820	93 3910	93 3620	93 3350	93 3090	112 120		-35	93 4810	93 3900	93 3620	93 3350	93 3090	110 119					
-30	93 4890	93 3980	93 3690	93 3410	93 3150	112 120		-30	93 4880	93 3970	93 3690	93 3410	93 3150	110 119					
-25	93 4970	93 4050	93 3760	93 3480	93 3210	112 120		-25	93 4960	93 4040	93 3760	93 3480	93 3210	110 119					
-20	93 5050	93 4120	93 3830	93 3550	93 3280	112 120		-20	93 5040	93 4110	93 3820	93 3550	93 3280	110 119					
-15	92 5120	92 4180	92 3880	92 3600	92 3330	111 120		-15	92 5100	92 4170	92 3880	92 3600	92 3330	110 119					
-10	92 5150	92 4210	92 3910	92 3630	92 3390	111 120		-10	92 5140	92 4200	92 3910	92 3630	92 3360	110 118					
-5	91 5160	91 4210	91 3940	92 3700	92 3480	111 119		-5	91 5140	91 4200	91 3910	91 3630	91 3350	109 118					
0	91 5310	91 4350	92 4100	93 3860	93 3630	111 118		0	89 5090	89 4150	89 3860	89 3590	90 3370	109 117					
5	93 5550	92 4550	93 4290	94 4040	94 3800	111 118		5	89 5140	89 4200	90 3960	90 3720	91 3500	108 116					
10	94 5840	94 4790	94 4520	95 4260	96 4000	111 118		10	90 5370	90 4380	91 4130	91 3890	92 3650	108 115					
15	95 6120	95 5030	96 4750	96 4480	97 4210	112 118		15	91 5620	91 4600	92 4340	92 4090	93 3840	109 115					
20	97 6410	96 5270	97 4980	97 4700	98 4430	112 118		20	93 5880	92 4820	93 4550	93 4280	94 4030	109 115					
25	99 6790	98 5590	98 5290	99 4990	99 4710	113 118		25	94 6220	94 5110	94 4820	95 4550	95 4280	110 115					
30	101 7340	100 6050	101 5720	101 5410	102 5100	114 118		30	97 6720	96 5520	97 5210	97 4920	98 4630	110 115					
35	104 7980	103 6580	103 6230	103 5890	104 5560	114 118		35	99 7290	99 5990	99 5670	99 5350	100 5040	111 115					
40	106 8710	105 7180	105 6800	106 6440	106 6080	115 118		40	102 7940	101 6530	101 6180	102 5840	102 5510	112 115					
42	107 9040	106 7450	106 7060	107 6680	107 6310	115 118		42	103 8240	102 6770	102 6410	103 6050	103 5710	112 115					

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS				
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT				
-35	93 4810	93 3910	93 3630	93 3360	93 3100	108 118		-35	93 4810	93 3920	93 3640	93 3370	93 3110	107 117					
-30	93 4880	93 3970	93 3690	93 3420	93 3160	108 118		-30	93 4880	93 3990	93 3700	93 3430	93 3170	107 117					
-25	93 4960	93 4040	93 3760	93 3490	93 3220	108 118		-25	93 4960	93 4050	93 3770	93 3500	93 3240	107 117					
-20	93 5030	93 4110	93 3830	93 3550	93 3280	108 118		-20	93 5040	93 4120	93 3840	93 3560	93 3300	107 117					
-15	93 5100	93 4170	93 3880	93 3600	93 3330	108 118		-15	93 5100	93 4180	93 3890	93 3610	93 3350	106 117					
-10	92 5130	92 4200	92 3910	92 3630	92 3360	108 117		-10	92 5130	92 4210	92 3920	92 3640	92 3370	106 116					
-5	91 5130	91 4200	91 3910	91 3630	91 3360	108 117		-5	91 5130	91 4200	91 3910	91 3630	91 3370	106 116					
0	89 5080	89 4140	89 3850	89 3570	89 3300	107 115		0	90 5070	90 4140	90 3850	90 3580	90 3310	105 114					
5	88 5030	88 4090	88 3800	88 3520	88 3260	106 114		5	88 5010	88 4090	88 3800	88 3520	88 3260	105 113					
10	86 4980	86 4050	87 3810	88 3580	88 3350	106 113		10	86 4960	86 4040	86 3750	86 3480	86 3210	104 112					
15	87 5160	87 4210	88 3970	88 3730	89 3500	106 113		15	85 4920	85 4000	85 3710	85 3440	86 3220	103 111					
20	88 5370	88 4390	89 4140	89 3890	90 3650	106 113		20	84 4940	84 4020	85 3780	86 3550	86 3330	103 110					
25	90 5690	90 4650	90 4380	91 4120	91 3870	106 113		25	86 5180	86 4210	86 3970	87 3730	87 3500	103 110					
30	93 6130	92 5010	93 4730	93 4460	94 4190	107 113		30	88 5570	88 4540	88 4270	89 4020	89 3770	104 110					
35	95 6640	94 5440	95 5130	95 4840	96 4550	108 113		35	91 6020	90 4910	91 4630	91 4360	92 4100	105 110					
40	98 7220	97 5920	97 5590	98 5270	98 4970	109 113		40	93 6540	93 5340	93 5040	93 4740	94 4460	105 110					
42	99 7480	98 6130	98 5790	99 5470	99 5150	109 113		42	94 6770	94 5530	94 5220	94 4910	95 4620	106 110					

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS				
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT				
-35	93 4830	93 3940	93 3660	93 3390	93 3140	105 116		-35	93 4860	93 3970	93 3690	93 3430	93 3170	103 115					
-30	93 4900	93 4000	93 3730	93 3460	93 3200	105 116		-30	93 4930	93 4040	93 3760	93 3490	93 3230	103 115					
-25	93 4980	93 4070	93 3790	93 3520	93 3260	105 116		-25	93 5010	93 4110	93 3820	93 3550	93 3290	103 115					
-20	93 5050	93 4140	93 3860	93 3590	93 3320	105 116		-20	93 5080	93 4170	93 3890	93 3620	93 3350	103 115					
-15	93 5110	93 4200	93 3910	93 3640	93 3370	105 116		-15	93 5140	93 4230	93 3940	93 3670	93 3400	103 115					
-10	92 5140	92 4220	92 3940	92 3660	92 3390	104 115		-10	92 5170	92 4250	92 3970	92 3690	92 3420	103 114					
-5	91 5140	91 4220	91 3930	91 3650	91 3380	104 115		-5	91 5160	91 4240	91 3950	91 3680	91 3410	102 114					
0	90 5070	90 4150	90 3860	90 3590	90 3320	103 113		0	90 5080	90 4170	90 3880	90 3610	90 3340	101 112					
5	88 5010	88 4090	88 3810	88 3530	88 3260	103 112		5	88 5010	88 4100	88 3820	88 3550	88 3280	101 111					
10	87 4950	87 4040	87 3750	87 3480	87 3210	102 111		10	87 4950	87 4040	87 3760	87 3490	87 3230	100 110					
15	85 4900	85 3990	85 3710	85 3430	85 3170	102 110		15	85 4900	85 3990	85 3710	85 3440	85 3180	100 109					
20	84 4860	84 3950	84 3670	84 3390	84 3130	101 109		20	84 4850	84 3950	84 3670	84 3390	84 3130	99 108					
25	82 4790	82 3880	82 3620	83 3400	84 3180	100 108		25	82 4780	82 3870	82 3590	82 3320	82 3060	98 106					
30	83 5040	83 4090	84 3840	85 3610	85 3380	100 107		30	80 4650	80 3750	80 3480	81 3260	81 3050	97 105					
35	86 5440	86 4420	86 4160	87 3910	87 3660	101 107		35	81 4880	81 3950	82 3710	82 3480	83 3250	98 104					
40	89 5900	88 4790	89 4510	89 4240	90 3980	102 107		40	84 5280	83 4270	84 4020	85 3770	85 3530	98 104					
42	90 6100	89 4960	90 4670	90 4390	90 4120	102 107		42	85 5460	84 4420	85 4160	85 3900	86 3650	99 104					

Figure 7-2 (Sheet 14)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**7000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS										WEIGHT = 12200 LBS									
VENR = 139 KIAS										VENR = 137 KIAS									
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
-35	99 5610	99 4590	99 4330	100 4080	100 3830	118 125			-35	97 5470	97 4470	98 4210	98 3970	99 3730	117 124				
-30	99 5720	99 4690	99 4430	100 4170	100 3920	118 125			-30	97 5570	97 4560	98 4310	98 4060	99 3810	117 124				
-25	99 5840	99 4800	99 4530	100 4270	101 4020	118 125			-25	98 5690	97 4670	98 4410	99 4150	99 3910	117 124				
-20	99 5970	99 4910	100 4640	100 4380	101 4120	118 125			-20	98 5810	98 4770	98 4510	99 4250	99 4000	117 124				
-15	100 6160	100 5080	100 4790	101 4530	101 4260	118 125			-15	98 6000	98 4940	99 4670	99 4400	100 4150	117 124				
-10	101 6380	100 5260	101 4980	101 4700	102 4430	118 125			-10	99 6210	99 5120	100 4840	100 4570	101 4300	117 124				
-5	102 6700	102 5540	102 5240	103 4950	103 4670	119 125			-5	101 6520	100 5380	101 5090	101 4810	102 4540	118 124				
0	104 7060	103 5850	104 5540	104 5240	105 4940	119 125			0	102 6880	102 5680	102 5380	103 5090	103 4800	118 124				
5	105 7440	105 6170	105 5840	105 5530	106 5220	120 125			5	104 7240	103 6000	104 5680	104 5370	105 5070	119 124				
10	105 8060	106 6500	106 6170	107 5840	107 5520	120 125			10	105 7630	105 6320	105 5990	106 5670	106 5360	119 124				
15	104 8750	107 6840	108 6490	108 6150	108 5820	121 125			15	105 8250	106 6650	106 6310	107 5970	107 5650	120 124				
20	103 9520	108 7200	109 6840	109 6480	110 6130	121 125			20	104 8970	107 7000	107 6640	108 6290	108 5950	120 124				
25		110 7730	111 7340	111 6960	111 6600	122 125			25	103 10080	109 7510	109 7130	110 6760	110 6400	121 124				
30		112 8410	113 7960	113 7550	113 7160	122 125			30		111 8130	111 7730	112 7330	112 6950	121 124				
31		112 8650	113 8090	113 7680	114 7280	122 125			31		112 8270	112 7850	112 7450	112 7060	121 124				
									32		112 8410	112 7990	113 7580	113 7180	121 124				

WEIGHT = 12000 LBS										WEIGHT = 11800 LBS									
VENR = 136 KIAS										VENR = 135 KIAS									
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
-35	96 5320	96 4340	96 4090	97 3850	98 3610	116 123			-35	94 5180	94 4220	95 3980	96 3740	97 3510	115 122				
-30	96 5420	96 4430	97 4180	97 3930	98 3700	116 123			-30	95 5270	95 4310	95 4060	96 3820	97 3590	115 122				
-25	96 5530	96 4530	97 4270	97 4030	98 3780	116 123			-25	95 5380	95 4400	95 4150	96 3910	97 3670	115 122				
-20	96 5640	96 4630	97 4370	97 4120	98 3870	116 123			-20	95 5490	95 4500	95 4250	96 4000	97 3760	115 122				
-15	97 5820	97 4780	97 4520	98 4260	99 4010	116 123			-15	95 5650	95 4640	96 4380	97 4130	97 3880	115 122				
-10	98 6030	98 4960	98 4690	99 4430	99 4170	116 123			-10	96 5840	96 4800	97 4540	97 4280	98 4030	115 122				
-5	99 6320	99 5210	99 4930	100 4650	101 4390	117 123			-5	98 6130	97 5050	98 4770	98 4500	99 4240	115 122				
0	101 6660	100 5500	101 5210	101 4920	102 4640	117 123			0	99 6460	99 5330	99 5040	100 4760	100 4480	116 122				
5	102 7020	102 5800	102 5490	103 5190	103 4900	118 123			5	101 6800	100 5610	101 5310	101 5020	102 4740	116 122				
10	104 7390	103 6120	104 5800	104 5480	105 5180	118 123			10	102 7160	102 5920	102 5600	103 5300	103 5000	117 122				
15	105 7760	104 6430	105 6100	105 5770	106 5460	118 123			15	104 7520	103 6220	103 5900	104 5580	104 5270	117 122				
20	105 8360	106 6770	106 6420	106 6080	107 5750	119 123			20	105 7900	104 6540	104 6200	105 5870	105 5550	118 122				
25	104 9390	107 7260	108 6890	108 6530	109 6180	119 123			25	106 8720	106 7020	106 6660	107 6300	107 5960	118 122				
30		110 7860	110 7460	110 7080	111 6700	120 123			30	104 9970	108 7590	108 7210	109 6830	109 6460	119 122				
32		110 8130	111 7720	111 7320	111 6930	120 123			34		110 8110	110 7700	110 7310	111 6920	119 122				
34		111 8400	112 7980	112 7580	112 7180	121 123			35		110 8260	111 7840	111 7440	111 7040	120 122				

WEIGHT = 11600 LBS										WEIGHT = 11400 LBS									
VENR = 134 KIAS										VENR = 132 KIAS									
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
-35	93 5040	93 4110	94 3860	95 3630	95 3410	114 121			-35	93 4980	93 4050	93 3770	93 3540	94 3320	113 121				
-30	93 5130	93 4190	94 3950	95 3710	95 3480	114 121			-30	92 5060	92 4120	93 3840	93 3610	94 3390	113 121				
-25	93 5230	93 4280	94 4040	95 3800	95 3570	114 121			-25	92 5120	92 4180	93 3930	93 3690	94 3470	113 121				
-20	93 5340	93 4370	94 4120	95 3880	95 3650	114 121			-20	92 5190	92 4250	93 4010	93 3770	94 3540	113 121				
-15	94 5490	94 4500	95 4250	95 4010	96 3770	114 121			-15	93 5340	93 4380	93 4130	94 3890	95 3650	113 120				
-10	95 5660	95 4650	95 4390	96 4140	96 3900	114 121			-10	93 5510	93 4520	94 4260	94 4020	95 3780	113 120				
-5	96 5940	96 4890	96 4620	97 4360	98 4100	114 121			-5	94 5750	94 4720	95 4460	95 4210	96 3960	113 120				
0	98 6250	97 5150	98 4870	98 4600	99 4330	115 121			0	96 6060	96 4990	96 4710	97 4440	97 4180	113 120				
5	99 6580	99 5430	99 5140	100 4850	100 4570	115 121			5	98 6370	97 5250	98 4960	98 4680	99 4410	114 120				
10	101 6930	100 5720	101 5420	101 5120	102 4830	116 121			10	99 6700	99 5530	99 5230	100 4940	100 4660	114 120				
15	102 7280	101 6010	102 5700	102 5390	103 5080	116 121			15	100 7040	100 5810	100 5500	101 5200	101 4910	115 120				
20	103 7640	103 6330	103 5990	103 5670	104 5360	116 121			20	102 7390	101 6110	101 5790	102 5470	102 5170	115 120				
25	105 8180	104 6780	105 6430	105 6080	106 5750	117 121			25	104 7910	103 6540	103 6200	104 5870	104 5540	116 120				
30	105 9220	107 7330	107 6950	107 6590	108 6230	118 121			30	106 8550	105 7070	105 6710	106 6350	106 6010	117 120				
35		109 7970	109 7570	109 7170	110 6790	118 121			35	105 9810	107 7690	108 7300	108 6910	108 6540	117 120				
37		110 8260	110 7850	110 7440	111 7040	119 121			37		108 7870	109 7560	109 7170	109 6780	117 120				
									40		110 8430	110 8000	110 7590	110 7180	118 120				

Figure 7-2 (Sheet 15)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
7000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST	VR V2										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT			KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS										
-35	93	4970	93	4040	93	3760	93	3480	93	3210	112	120	-35	93	4960	93	4040	93	3750	93	3480	93	3210	110	119
-30	93	5040	93	4110	93	3820	93	3540	93	3270	112	120	-30	93	5030	93	4100	93	3820	93	3540	93	3270	110	119
-25	92	5110	92	4170	92	3880	92	3590	92	3320	112	120	-25	92	5090	92	4160	92	3870	92	3590	92	3320	110	119
-20	92	5170	92	4230	92	3930	92	3650	92	3380	111	120	-20	92	5160	92	4220	92	3930	92	3650	92	3370	110	119
-15	91	5200	91	4250	91	3950	92	3690	92	3460	111	119	-15	91	5180	91	4240	91	3950	91	3660	91	3390	110	118
-10	90	5210	90	4270	91	4020	92	3780	93	3550	111	119	-10	91	5190	91	4250	91	3950	91	3670	91	3390	109	118
-5	91	5420	91	4440	92	4190	93	3940	93	3710	111	118	-5	89	5160	89	4210	89	3910	90	3670	90	3440	109	116
0	93	5670	93	4650	93	4390	94	4140	94	3890	111	118	0	89	5250	89	4290	90	4050	90	3810	91	3580	108	116
5	94	5970	94	4900	95	4630	95	4360	96	4100	111	118	5	90	5480	90	4480	91	4230	91	3980	92	3740	108	115
10	96	6270	95	5160	96	4870	96	4600	97	4330	112	118	10	92	5750	91	4720	92	4450	93	4190	93	3950	109	115
15	97	6580	97	5420	97	5120	98	4840	98	4560	112	118	15	93	6030	93	4950	93	4670	94	4410	94	4150	109	115
20	98	6900	98	5690	98	5390	99	5090	99	4800	113	118	20	94	6320	94	5200	94	4910	95	4630	95	4360	110	115
25	100	7380	100	6090	100	5770	101	5450	101	5150	113	118	25	96	6760	96	5560	96	5260	97	4960	97	4670	110	115
30	103	7970	102	6580	102	6230	103	5900	103	5570	114	118	30	99	7280	98	6000	98	5670	99	5360	99	5050	111	115
35	105	8650	104	7140	104	6770	105	6410	105	6060	115	118	35	101	7890	100	6500	100	6150	101	5820	101	5490	112	115
40	107	9660	107	7820	107	7420	107	7020	107	6640	115	118	40	104	8620	102	7100	103	6730	103	6370	103	6010	112	115

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST	VR V2										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT			KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS										
-35	93	4950	93	4040	93	3760	93	3480	93	3220	108	118	-35	93	4960	93	4050	93	3770	93	3500	93	3230	107	117
-30	93	5020	93	4110	93	3820	93	3540	93	3280	108	118	-30	93	5030	93	4120	93	3830	93	3560	93	3290	107	117
-25	93	5090	93	4160	93	3870	93	3600	93	3330	108	118	-25	93	5090	93	4170	93	3890	93	3610	93	3340	106	117
-20	92	5150	92	4220	92	3930	92	3650	92	3380	108	118	-20	92	5150	92	4230	92	3940	92	3660	92	3390	106	117
-15	92	5170	92	4240	92	3950	92	3660	92	3390	108	117	-15	92	5170	92	4240	92	3950	92	3670	92	3400	106	116
-10	91	5180	91	4240	91	3950	91	3670	91	3390	107	117	-10	91	5180	91	4240	91	3950	91	3670	91	3400	106	115
-5	89	5140	89	4200	89	3910	89	3620	89	3350	107	115	-5	89	5130	89	4200	89	3910	89	3630	89	3360	105	114
0	88	5090	88	4150	88	3860	88	3580	88	3330	106	114	0	88	5070	88	4140	88	3850	88	3570	88	3300	104	113
5	86	5060	86	4130	87	3890	88	3660	88	3430	106	113	5	86	5020	86	4090	86	3800	86	3520	86	3260	104	112
10	87	5280	87	4310	88	4060	89	3820	89	3590	106	113	10	85	4970	85	4050	85	3760	85	3520	86	3300	103	111
15	89	5510	89	4510	89	4250	90	4000	90	3760	106	113	15	85	5060	85	4120	85	3880	86	3650	87	3420	103	110
20	90	5780	90	4730	90	4460	91	4200	91	3950	106	113	20	86	5260	86	4290	86	4040	87	3800	87	3570	103	110
25	92	6160	92	5050	92	4770	93	4500	93	4230	107	113	25	88	5610	87	4580	88	4320	88	4060	89	3810	104	110
30	94	6630	94	5440	94	5140	95	4850	95	4570	108	113	30	90	6020	90	4920	90	4640	91	4370	91	4110	104	110
35	97	7180	96	5890	96	5570	97	5260	97	4950	109	113	35	92	6500	92	5320	92	5020	93	4730	93	4450	105	110
40	99	7830	98	6430	99	6080	99	5740	99	5420	109	113	40	95	7080	94	5800	95	5480	95	5160	95	4860	106	110

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST	VR V2										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT			KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS										
-35	93	4970	93	4070	93	3790	93	3520	93	3260	105	116	-35	93	5000	93	4100	93	3820	93	3550	93	3290	103	115
-30	93	5040	93	4130	93	3850	93	3580	93	3310	105	116	-30	93	5070	93	4170	93	3880	93	3610	93	3340	103	115
-25	93	5110	93	4190	93	3900	93	3630	93	3360	105	116	-25	93	5130	93	4220	93	3940	93	3660	93	3390	103	115
-20	93	5170	93	4250	93	3960	93	3680	93	3410	105	116	-20	93	5190	93	4270	93	3990	93	3710	93	3440	103	115
-15	92	5180	92	4260	92	3970	92	3690	92	3420	104	115	-15	92	5200	92	4280	92	4000	92	3720	92	3450	102	114
-10	91	5180	91	4260	91	3970	91	3690	91	3420	104	114	-10	91	5200	91	4280	91	3990	91	3710	91	3440	102	113
-5	89	5130	89	4200	89	3920	89	3640	89	3370	103	113	-5	90	5140	90	4220	90	3930	90	3660	90	3390	101	112
0	88	5070	88	4140	88	3860	88	3580	88	3310	103	112	0	88	5070	88	4160	88	3870	88	3590	88	3330	101	111
5	86	5010	86	4090	86	3800	86	3530	86	3260	102	111	5	86	5010	86	4100	86	3810	86	3540	86	3270	100	110
10	85	4960	85	4040	85	3750	85	3470	85	3210	101	110	10	85	4950	85	4040	85	3750	85	3480	85	3220	99	108
15	83	4910	83	3990	83	3710	83	3430	83	3170	101	109	15	84	4900	84	3990	84	3710	84	3430	84	3170	99	107
20	82	4870	82	3950	82	3690	83	3470	84	3250	100	108	20	82	4850	82	3940	82	3660	82	3390	82	3130	98	106
25	83	5080	83	4130	84	3890	84	3650	85	3420	100	107	25	80	4760	80	3850	80	3570	80	3320	81	3110	98	105
30	85	5440	85	4430	86	4170	86	3920	87	3670	101	107	30	81	4900	81	3970	81	3730	82	3500	82	3280	97	104
35	88	5870	87	4780	88	4500	88	4240	89	3980	102	107	35	83	5260	83	4270	83	4020	84	3770	84	3530	98	104
40	90	6380	90	5200	90	4900	91	4610	91	4340	103	107	40	85	5710	85	4630	86	4360	86	4100	86	3840	99	104

Figure 7-2 (Sheet 16)



**TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)**

**FLAPS - UP  
8000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND	HEADWINDS			VR V2 KIAS										
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	KIAS	FT	KIAS			KIAS	FT	KIAS	KIAS	FT	KIAS		FT									
-35	99	5800	99	4760	99	4500	100	4240	100	3990	118	125	-35	97	5650	97	4630	98	4370	99	4120	99	3880	117	124
-30	99	5920	99	4870	99	4600	100	4340	101	4090	118	125	-30	97	5770	97	4740	98	4470	99	4220	99	3970	117	124
-25	99	6040	99	4980	99	4710	100	4440	101	4180	118	125	-25	98	5880	98	4840	98	4570	99	4320	99	4060	117	124
-20	99	6190	99	5110	100	4830	100	4570	101	4300	118	125	-20	98	6030	98	4970	98	4700	99	4440	100	4180	117	124
-15	101	6500	100	5370	101	5080	102	4800	102	4530	118	125	-15	99	6330	99	5220	100	4940	100	4670	101	4400	117	124
-10	102	6830	102	5660	102	5360	103	5060	103	4780	119	125	-10	101	6650	100	5500	101	5210	102	4920	102	4640	118	124
-5	104	7210	103	5980	104	5660	104	5360	105	5060	119	125	-5	102	7020	102	5810	103	5510	103	5210	104	4920	118	124
0	105	7700	105	6320	105	5990	106	5670	106	5360	120	125	0	104	7410	103	6140	104	5820	104	5510	105	5200	119	124
5	104	8400	106	6660	107	6320	107	5990	107	5660	120	125	5	105	7920	105	6480	105	6140	106	5820	106	5500	119	124
10	103	9160	107	7030	108	6680	108	6330	109	5990	121	125	10	104	8630	106	6830	107	6480	107	6140	107	5810	120	124
15	102	9980	109	7410	109	7040	109	6670	110	6320	121	125	15	103	9400	107	7200	108	6830	108	6480	109	6130	120	124
20			110	7840	110	7460	111	7070	111	6700	121	125	20			109	7610	109	7230	109	6860	110	6500	120	124
25			111	8610	112	8030	113	7620	113	7230	122	125	25			111	8200	111	7790	111	7390	112	7010	121	124
26			111	8850	113	8150	113	7740	113	7340	122	125	27			111	8450	112	8030	112	7620	112	7230	121	124
27			111	9100	113	8280	113	7860	114	7460	122	125	29			111	8940	113	8290	113	7870	113	7460	122	124

WEIGHT = 12000 LBS								WEIGHT = 11800 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND	HEADWINDS			VR V2 KIAS										
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	KIAS	FT	KIAS			KIAS	FT	KIAS	KIAS	FT	KIAS		FT									
-35	96	5490	96	4500	97	4240	98	3760	116	123	-35	95	5340	95	4370	95	4120	96	3880	97	3650	115	122		
-30	96	5600	96	4600	97	4340	98	3840	116	123	-30	95	5450	95	4470	95	4220	96	3970	97	3730	115	122		
-25	96	5710	96	4690	97	4430	98	3930	116	123	-25	95	5560	95	4560	95	4310	96	4060	97	3820	115	122		
-20	96	5850	96	4810	97	4550	98	4290	98	4040	116	123	-20	95	5690	95	4680	96	4420	96	4170	97	3920	115	122
-15	98	6140	98	5060	98	4790	99	4520	99	4250	116	123	-15	96	5950	96	4900	97	4630	97	4370	98	4120	115	122
-10	99	6450	99	5330	100	5040	100	4760	101	4490	117	123	-10	98	6250	97	5160	98	4880	99	4600	99	4340	115	122
-5	101	6800	100	5630	101	5330	102	5040	102	4750	117	123	-5	99	6590	99	5450	100	5150	100	4870	101	4590	116	122
0	103	7180	102	5940	102	5630	103	5330	103	5030	118	123	0	101	6950	100	5750	101	5440	101	5150	102	4860	116	122
5	104	7560	103	6270	104	5940	104	5620	105	5310	118	123	5	102	7320	102	6060	102	5740	103	5430	103	5130	117	122
10	105	8060	105	6610	105	6270	106	5940	106	5610	119	123	10	104	7710	103	6390	104	6060	104	5740	104	5420	117	122
15	104	8770	106	6960	106	6610	107	6260	107	5920	119	123	15	105	8160	104	6730	105	6380	105	6050	106	5720	118	122
20	103	9620	107	7360	108	6990	108	6630	108	6270	119	123	20	104	8940	106	7110	106	6750	107	6400	107	6050	118	122
25			109	7920	110	7530	110	7140	110	6760	120	123	25	103	10110	108	7650	108	7270	108	6890	109	6520	119	122
29			111	8420	111	8000	111	7600	112	7200	120	123	30			110	8260	110	7850	110	7450	111	7060	119	122
30			111	8550	111	8130	112	7720	112	7320	121	123	32			110	8530	111	8110	111	7690	111	7290	120	122

WEIGHT = 11600 LBS								WEIGHT = 11400 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND	HEADWINDS			VR V2 KIAS										
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS			10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	KIAS	FT	KIAS			KIAS	FT	KIAS	KIAS	FT	KIAS		FT									
-35	93	5200	93	4250	94	4010	95	3770	95	3540	114	121	-35	93	5130	93	4190	93	3900	93	3670	94	3440	113	121
-30	93	5300	93	4340	94	4090	95	3860	95	3620	114	121	-30	92	5210	92	4250	93	3980	93	3750	94	3520	113	121
-25	93	5410	93	4430	94	4180	95	3940	95	3710	114	121	-25	92	5280	92	4320	93	4070	93	3830	94	3600	113	121
-20	94	5530	94	4540	94	4290	95	4040	96	3810	114	121	-20	92	5380	92	4420	93	4170	94	3930	94	3690	113	120
-15	95	5770	95	4740	95	4480	96	4230	96	3980	114	121	-15	93	5610	93	4610	94	4350	95	4100	95	3860	113	120
-10	96	6060	96	4990	97	4720	97	4450	98	4190	114	121	-10	95	5870	94	4830	95	4560	96	4300	96	4050	113	120
-5	98	6380	97	5270	98	4980	99	4700	99	4430	115	121	-5	96	6180	96	5090	96	4810	97	4540	98	4280	114	120
0	99	6730	99	5560	99	5260	100	4970	100	4690	115	121	0	98	6510	97	5370	98	5080	98	4800	99	4530	114	120
5	101	7090	100	5860	101	5550	101	5250	102	4950	116	121	5	99	6860	99	5660	99	5360	100	5070	100	4780	114	120
10	102	7460	102	6180	102	5850	103	5540	103	5230	116	121	10	101	7220	100	5970	101	5650	101	5350	101	5050	115	120
15	104	7840	103	6500	103	6170	104	5840	104	5520	117	121	15	102	7590	101	6280	102	5950	102	5630	103	5320	115	120
20	105	8310	104	6870	105	6520	105	6180	105	5840	117	121	20	104	8010	103	6640	103	6290	103	5960	104	5630	116	120
25	104	9370	106	7390	106	7010	107	6650	107	6290	118	121	25	105	8550	105	7130	105	6770	105	6410	106	6060	116	120
30			108	7980	108	7580	109	7190	109	6800	118	121	30	105	9880	107	7690	107	7300	107	6920	108	6550	117	120
32			109	8230	109	7820	110	7420	110	7030	118	121	33			108	8080	108	7670	108	7270	109	6880	117	120
33			109	8370	110	7950	110	7550	110	7150	119	121	35			109	8370	109	7960	109	7550	110	7150	118	120
													36			109	8530	110	8110	110	7690	110	7290	118	120

Figure 7-2 (Sheet 17)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
8000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS							
VENR = 130 KIAS								VENR = 126 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 5120	93 4180	93 3890	93 3600	93 3330	112 120		-35	93 5110	93 4170	93 3880	93 3600	93 3330	110 119	
-30	92 5190	92 4240	92 3950	92 3660	92 3390	112 120		-30	93 5180	93 4240	93 3950	93 3660	93 3390	110 119	
-25	92 5260	92 4310	92 4010	92 3720	92 3450	111 120		-25	92 5250	92 4300	92 4010	92 3720	92 3450	110 119	
-20	92 5320	92 4360	92 4060	92 3770	92 3510	111 120		-20	92 5300	92 4350	92 4050	92 3760	92 3490	110 119	
-15	90 5290	91 4340	91 4100	92 3860	93 3630	111 119		-15	90 5260	90 4310	90 4010	90 3730	90 3450	109 118	
-10	92 5520	92 4530	92 4280	93 4030	93 3790	111 118		-10	89 5220	89 4270	89 3980	90 3740	90 3520	109 116	
-5	93 5790	93 4750	93 4490	94 4230	95 3980	111 118		-5	89 5350	89 4380	90 4140	90 3890	91 3660	108 116	
0	94 6090	94 5010	95 4740	95 4470	96 4210	112 118		0	90 5590	90 4580	91 4330	91 4080	92 3830	108 115	
5	96 6410	96 5280	96 4990	97 4710	97 4440	112 118		5	92 5880	92 4830	92 4560	93 4300	93 4040	109 115	
10	97 6740	97 5560	97 5260	98 4970	98 4690	112 118		10	93 6180	93 5080	93 4800	94 4530	94 4260	109 115	
15	99 7080	98 5850	99 5540	99 5240	100 4940	113 118		15	95 6490	94 5340	95 5050	95 4770	96 4490	110 115	
20	100 7470	100 6180	100 5850	100 5540	101 5230	113 118		20	96 6840	96 5640	96 5330	96 5040	97 4750	110 115	
25	102 8020	101 6630	102 6290	102 5950	103 5620	114 118		25	98 7330	97 6040	98 5720	98 5410	99 5100	111 115	
30	105 8640	103 7150	104 6780	104 6420	105 6070	115 118		30	100 7880	99 6510	100 6160	100 5830	101 5500	111 115	
35	106 9610	106 7780	106 7380	106 7000	107 6620	115 118		35	103 8550	102 7060	102 6700	102 6340	103 5990	112 115	
36	106 9940	106 7920	106 7520	107 7120	107 6740	115 118		37	104 8880	103 7330	103 6950	103 6580	104 6220	112 115	
37	106 10300	107 8070	107 7660	107 7260	108 6870	116 118									

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS							
VENR = 124 KIAS								VENR = 120 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 5100	93 4170	93 3890	93 3610	93 3340	108 118		-35	93 5100	93 4180	93 3900	93 3620	93 3350	107 117	
-30	93 5170	93 4240	93 3950	93 3670	93 3400	108 118		-30	93 5180	93 4250	93 3960	93 3680	93 3410	107 117	
-25	92 5240	92 4300	92 4010	92 3730	92 3450	108 118		-25	93 5240	93 4310	93 4020	93 3740	93 3460	106 117	
-20	92 5290	92 4350	92 4050	92 3770	92 3490	108 118		-20	92 5290	92 4350	92 4060	92 3780	92 3500	106 117	
-15	91 5250	91 4300	91 4010	91 3720	91 3450	107 116		-15	91 5240	91 4310	91 4010	91 3730	91 3460	106 115	
-10	89 5200	89 4260	89 3960	89 3680	89 3400	107 115		-10	89 5190	89 4250	89 3960	89 3680	89 3410	105 114	
-5	87 5150	87 4210	87 3910	87 3630	88 3400	106 114		-5	88 5130	88 4200	88 3910	88 3620	88 3350	104 113	
0	86 5160	87 4220	87 3980	88 3740	88 3520	106 113		0	86 5080	86 4150	86 3850	86 3570	86 3300	104 112	
5	88 5390	88 4410	88 4160	89 3910	89 3680	106 113		5	84 5030	84 4100	85 3830	85 3600	86 3370	103 111	
10	89 5650	89 4630	89 4360	90 4110	91 3870	106 113		10	85 5170	85 4220	85 3980	86 3740	87 3510	103 110	
15	90 5920	90 4860	91 4590	91 4320	92 4060	107 113		15	86 5390	86 4400	86 4150	87 3900	88 3670	103 110	
20	92 6240	91 5120	92 4840	92 4560	93 4300	107 113		20	87 5670	87 4640	88 4380	88 4120	89 3870	104 110	
25	94 6680	93 5490	94 5190	94 4900	95 4610	108 113		25	89 6060	89 4960	90 4690	90 4410	91 4150	104 110	
30	96 7170	95 5900	96 5580	96 5270	97 4970	108 113		30	92 6500	91 5330	92 5030	92 4750	92 4470	105 110	
35	98 7770	98 6400	98 6060	98 5720	99 5400	109 113		35	94 7040	93 5770	94 5460	94 5150	95 4850	106 110	
37	100 8050	98 6630	99 6280	99 5930	100 5600	109 113		37	95 7290	94 5980	95 5650	95 5330	95 5020	106 110	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 117 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 5120	93 4200	93 3920	93 3640	93 3370	105 116		-35	93 5150	93 4230	93 3950	93 3670	93 3410	103 115	
-30	93 5190	93 4270	93 3980	93 3700	93 3430	105 116		-30	93 5220	93 4300	93 4010	93 3730	93 3460	103 115	
-25	93 5260	93 4330	93 4040	93 3760	93 3490	105 116		-25	93 5280	93 4360	93 4070	93 3790	93 3520	103 115	
-20	92 5300	92 4370	92 4080	92 3790	92 3520	105 115		-20	92 5330	92 4400	92 4110	92 3820	92 3550	103 114	
-15	91 5250	91 4320	91 4030	91 3740	91 3470	104 114		-15	91 5270	91 4340	91 4050	91 3770	91 3500	102 113	
-10	89 5190	89 4260	89 3970	89 3690	89 3420	103 113		-10	89 5200	89 4280	89 3990	89 3710	89 3440	101 112	
-5	88 5130	88 4200	88 3910	88 3630	88 3360	103 112		-5	88 5130	88 4210	88 3920	88 3640	88 3370	101 111	
0	86 5070	86 4140	86 3850	86 3570	86 3300	102 111		0	86 5070	86 4150	86 3860	86 3580	86 3320	100 109	
5	85 5020	85 4090	85 3800	85 3520	85 3260	101 110		5	85 5010	85 4090	85 3800	85 3530	85 3260	99 108	
10	83 4970	83 4040	83 3750	83 3480	83 3230	101 109		10	83 4950	83 4040	83 3750	83 3480	83 3210	99 107	
15	82 4930	82 4020	83 3780	83 3510	84 3330	100 108		15	82 4910	82 3990	82 3700	82 3430	82 3160	98 106	
20	83 5150	83 4190	84 3950	84 3710	85 3480	100 107		20	80 4850	80 3930	80 3650	80 3380	81 3170	98 105	
25	85 5480	85 4470	85 4210	86 3960	86 3720	101 107		25	80 4950	80 4010	81 3780	81 3550	82 3320	97 104	
30	87 5870	87 4790	87 4520	88 4250	88 3990	102 107		30	82 5270	82 4280	83 4030	83 3780	84 3550	98 104	
35	89 6340	89 5180	89 4890	90 4600	90 4330	102 107		35	85 5680	84 4620	85 4350	85 4080	86 3840	99 104	
37	90 6560	90 5360	90 5060	91 4770	91 4480	103 107		37	86 5870	85 4780	86 4500	86 4230	87 3970	99 104	

Figure 7-2 (Sheet 18)



TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
9000 FEET

CONDITIONS: WET RUNWAY      ANTI-ICE - OFF  
RUNWAY GRADIENT - ZERO      SPEED BRAKES - RETRACT  
LANDING GEAR - DOWN      INOPERATIVE ENGINE - WINDMILLING AFTER V1  
THRUST ATTENUATORS - AUTO      OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS																	
VENR = 139 KIAS								VENR = 138 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2	KIAS	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2	KIAS										
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST												
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT												
-35	99	6070	99	5000	100	4730	100	4460	101	4200	118	125	-35	98	5910	98	4860	98	4600	99	4340	100	4080	117	124
-30	100	6240	100	5150	100	4870	101	4600	101	4330	118	125	-30	98	6080	98	5010	99	4740	99	4470	100	4210	117	124
-25	100	6410	100	5300	101	5020	101	4740	102	4470	118	125	-25	99	6250	99	5160	99	4880	100	4610	100	4340	117	124
-20	101	6670	101	5520	101	5220	102	4940	102	4660	119	125	-20	100	6490	100	5370	100	5080	101	4800	101	4530	118	124
-15	103	6990	102	5800	103	5490	103	5200	104	4910	119	125	-15	101	6810	101	5640	101	5340	102	5050	102	4770	118	124
-10	104	7360	103	6110	104	5790	104	5480	105	5180	119	125	-10	103	7170	102	5940	103	5630	103	5330	104	5030	118	124
-5	104	8000	105	6460	105	6130	106	5800	106	5490	120	125	-5	104	7850	104	6280	104	5950	105	5640	105	5330	119	124
0	103	8730	106	6830	107	6480	107	6140	108	5810	120	125	0	104	8250	105	6640	105	6300	106	5970	106	5640	119	124
5	102	9540	108	7210	108	6850	108	6500	109	6150	121	125	5	103	9010	106	7010	107	6650	107	6310	108	5970	120	124
10			109	7610	109	7230	110	6860	110	6500	121	125	10	102	9830	108	7390	108	7020	108	6660	109	6310	120	124
15			110	8030	111	7640	111	7250	111	6880	122	125	15			109	7800	109	7420	110	7040	110	6670	121	124
20			110	8910	112	8140	112	7740	113	7340	122	125	20			110	8310	111	7900	111	7510	111	7120	121	124
21			110	9140	112	8260	113	7850	113	7440	122	125	23			110	8940	112	8250	112	7840	112	7430	121	124
23			113	8580	113	8080	114	7670	122	125			25			113	8500	113	8070	113	7660	122	124		

WEIGHT = 12000 LBS								WEIGHT = 11800 LBS																	
VENR = 136 KIAS								VENR = 135 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2	KIAS	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2	KIAS										
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST												
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT												
-35	96	5730	96	4710	97	4450	98	4190	98	3950	116	123	-35	95	5570	95	4570	96	4320	96	4070	97	3830	115	122
-30	97	5890	97	4850	97	4580	98	4330	99	4070	116	123	-30	95	5720	95	4700	96	4440	97	4190	97	3940	115	122
-25	97	6060	97	5000	98	4720	98	4460	99	4200	116	123	-25	96	5870	96	4840	96	4570	97	4310	97	4060	115	122
-20	98	6300	98	5200	99	4920	99	4640	100	4380	116	123	-20	97	6100	97	5030	97	4760	98	4500	98	4240	115	122
-15	100	6600	99	5460	100	5170	100	4880	101	4610	117	123	-15	98	6400	98	5280	98	5000	99	4720	99	4450	116	122
-10	101	6950	101	5750	101	5450	102	5150	102	4860	117	123	-10	99	6730	99	5570	100	5270	100	4980	101	4700	116	122
-5	103	7330	102	6080	103	5760	103	5450	104	5150	118	123	-5	101	7100	101	5880	101	5570	102	5270	102	4980	117	122
0	104	7730	103	6420	104	6090	104	5770	105	5450	118	123	0	103	7490	102	6210	102	5890	103	5570	103	5270	117	122
5	104	8410	105	6780	105	6430	106	6100	106	5770	119	123	5	104	7900	103	6560	104	6220	104	5890	105	5570	117	122
10	103	9180	106	7150	107	6790	107	6440	107	6090	119	123	10	104	8550	105	6910	105	6560	105	6220	106	5880	118	122
15	102	10020	107	7540	108	7170	108	6800	109	6440	119	123	15	103	9340	106	7290	106	6920	107	6560	107	6210	118	122
20			109	8030	109	7630	110	7250	110	6870	120	123	20			107	7760	108	7370	108	6990	108	6630	119	122
25			111	8640	111	8200	111	7790	112	7390	120	123	25			109	8330	110	7920	110	7520	110	7130	119	122
26			111	8870	111	8330	112	7910	112	7500	121	123	26			110	8450	110	8040	110	7630	111	7230	119	122
													28			110	8710	111	8280	111	7870	111	7460	120	122

WEIGHT = 11600 LBS								WEIGHT = 11400 LBS																	
VENR = 134 KIAS								VENR = 133 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2	KIAS	TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2	KIAS										
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST												
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT												
-35	94	5420	94	4440	94	4190	95	3950	96	3710	114	121	-35	92	5270	92	4320	93	4070	94	3830	94	3600	113	120
-30	94	5560	94	4570	95	4310	95	4060	96	3820	114	121	-30	93	5410	93	4440	93	4190	94	3940	95	3710	113	120
-25	94	5700	94	4690	95	4430	96	4180	96	3930	114	121	-25	93	5550	93	4560	94	4300	94	4060	95	3820	113	120
-20	95	5910	95	4870	96	4600	96	4340	97	4090	114	121	-20	94	5740	94	4720	94	4460	95	4210	95	3960	113	120
-15	96	6200	96	5120	97	4840	97	4560	98	4300	114	121	-15	95	6000	95	4950	95	4680	96	4410	96	4160	113	120
-10	98	6520	98	5380	98	5090	99	4810	99	4540	115	121	-10	96	6310	96	5200	97	4920	97	4650	98	4380	114	120
-5	99	6870	99	5690	100	5380	100	5090	101	4800	115	121	-5	98	6650	98	5490	98	5200	99	4910	99	4640	114	120
0	101	7250	100	6000	101	5690	101	5380	102	5080	116	121	0	99	7010	99	5800	99	5490	100	5190	100	4900	115	120
5	103	7640	102	6340	102	6010	103	5690	103	5370	116	121	5	101	7390	100	6120	101	5800	101	5490	102	5180	115	120
10	104	8040	103	6680	104	6340	104	6000	104	5680	117	121	10	102	7780	102	6450	102	6120	102	5790	103	5470	115	120
15	104	8670	104	7040	105	6680	105	6330	106	5990	117	121	15	104	8190	103	6800	103	6450	104	6110	104	5780	116	120
20	103	9620	106	7490	106	7110	107	6750	107	6390	118	121	20	104	8890	104	7230	105	6860	105	6510	105	6160	116	120
25			108	8040	108	7640	108	7250	109	6870	118	121	25	103	10030	106	7760	107	7370	107	6990	107	6620	117	120
28			109	8400	109	7990	109	7580	110	7190	118	121	30			108	8350	108	7940	109	7530	109	7140	117	120
30			110	8660	110	8240	110	7820	110	7410	119	121	33			109	8810	110	8380	110	7960	110	7540	118	120

Figure 7-2 (Sheet 19)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
9000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS				
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT				
-35	92 5230	92 4280	92 3980	92 3690	92 3430	111 120		-35	92 5210	92 4270	92 3980	92 3690	92 3420	110 119					
-30	91 5280	91 4320	91 4020	91 3740	92 3510	111 119		-30	92 5260	92 4310	92 4010	92 3730	92 3450	110 118					
-25	91 5330	91 4360	91 4070	92 3830	92 3600	111 119		-25	91 5310	91 4350	91 4050	91 3760	91 3490	109 118					
-20	91 5410	91 4440	91 4200	92 3950	93 3720	111 118		-20	90 5310	90 4350	90 4050	90 3760	90 3480	109 117					
-15	92 5640	92 4630	92 4380	93 4130	94 3880	111 118		-15	89 5280	89 4320	89 4060	90 3820	90 3590	108 116					
-10	93 5900	93 4860	94 4590	94 4330	95 4080	111 118		-10	89 5460	89 4480	90 4230	90 3980	91 3740	108 116					
-5	95 6220	94 5130	95 4850	95 4570	96 4310	112 118		-5	90 5710	90 4690	91 4430	92 4170	92 3920	108 115					
0	96 6550	96 5410	96 5120	97 4830	97 4560	112 118		0	92 6010	92 4950	92 4670	93 4400	93 4140	109 115					
5	98 6900	97 5700	98 5400	98 5100	99 4810	113 118		5	93 6320	93 5210	94 4920	94 4650	95 4380	109 115					
10	99 7260	98 6010	99 5690	99 5380	100 5080	113 118		10	95 6650	94 5480	95 5190	95 4900	96 4620	110 115					
15	100 7640	100 6330	100 6000	101 5680	101 5360	113 118		15	96 6990	96 5770	96 5460	97 5160	97 4870	110 115					
20	102 8110	101 6730	102 6380	102 6040	102 5710	114 118		20	98 7410	97 6130	98 5800	98 5490	99 5180	111 115					
25	104 8690	103 7210	103 6840	104 6480	104 6130	114 118		25	100 7930	99 6560	99 6220	100 5880	100 5560	111 115					
30	105 9630	105 7760	105 7370	106 6980	106 6610	115 118		30	102 8520	101 7050	101 6690	102 6330	102 5980	112 115					
33		106 8180	107 7770	107 7370	107 6970	115 118		35	105 9320	103 7710	103 7310	104 6930	104 6550	113 115					
35		107 8490	108 8070	108 7650	108 7250	116 118													

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS				
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT				
-35	92 5210	92 4270	92 3980	92 3690	92 3420	108 118		-35	92 5210	92 4280	92 3990	92 3700	92 3430	106 117					
-30	92 5250	92 4310	92 4010	92 3730	92 3460	108 117		-30	92 5250	92 4310	92 4020	92 3740	92 3470	106 116					
-25	91 5290	91 4350	91 4050	91 3760	91 3490	108 117		-25	91 5290	91 4350	91 4060	91 3770	91 3500	106 116					
-20	90 5290	90 4340	90 4050	90 3760	90 3480	107 116		-20	90 5290	90 4340	90 4050	90 3760	90 3490	106 115					
-15	89 5260	89 4310	89 4010	89 3720	89 3450	107 115		-15	89 5250	89 4300	89 4010	89 3720	89 3450	105 114					
-10	87 5220	87 4260	87 3970	87 3700	88 3470	106 114		-10	87 5200	87 4250	87 3960	87 3680	87 3400	104 113					
-5	87 5270	87 4310	87 4070	88 3830	89 3600	106 113		-5	86 5140	86 4200	86 3910	86 3630	86 3350	104 112					
0	88 5500	88 4510	88 4260	89 4010	90 3770	106 113		0	84 5100	84 4150	85 3910	85 3680	86 3450	103 111					
5	89 5780	89 4740	90 4480	90 4220	91 3970	106 113		5	85 5280	85 4320	86 4070	86 3830	87 3600	103 110					
10	91 6070	90 4980	91 4710	91 4440	92 4180	107 113		10	86 5520	86 4510	87 4260	87 4010	88 3770	103 110					
15	92 6370	92 5240	92 4960	93 4680	93 4400	107 113		15	88 5800	87 4750	88 4490	88 4220	89 3970	104 110					
20	94 6750	93 5560	94 5260	94 4970	95 4680	108 113		20	89 6130	89 5030	89 4750	90 4480	90 4220	104 110					
25	96 7220	95 5950	95 5630	96 5320	96 5020	108 113		25	91 6550	91 5380	91 5080	92 4790	92 4510	105 110					
30	98 7740	97 6390	97 6050	98 5720	98 5400	109 113		30	93 7010	93 5770	93 5450	93 5150	94 4850	105 110					
35	100 8440	99 6970	99 6600	100 6250	100 5900	109 113		35	96 7630	95 6280	95 5940	96 5610	96 5290	106 110					

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS				
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT				
-35	92 5220	92 4290	92 4000	92 3720	92 3450	105 115		-35	93 5240	93 4320	93 4030	93 3750	93 3480	103 114					
-30	92 5260	92 4330	92 4040	92 3760	92 3480	104 115		-30	92 5280	92 4350	92 4060	92 3780	92 3510	102 114					
-25	91 5300	91 4360	91 4070	91 3790	91 3510	104 115		-25	92 5320	92 4390	92 4100	92 3810	92 3540	102 114					
-20	90 5290	90 4350	90 4060	90 3780	90 3500	104 114		-20	90 5300	90 4370	90 4080	90 3800	90 3530	102 113					
-15	89 5240	89 4310	89 4010	89 3730	89 3460	103 113		-15	89 5250	89 4320	89 4030	89 3750	89 3480	101 112					
-10	87 5190	87 4250	87 3960	87 3680	87 3410	103 112		-10	87 5190	87 4260	87 3970	87 3690	87 3420	101 111					
-5	86 5130	86 4200	86 3910	86 3620	86 3350	102 111		-5	86 5130	86 4200	86 3910	86 3630	86 3360	100 109					
0	84 5080	84 4140	84 3850	84 3570	84 3300	101 109		0	84 5070	84 4140	84 3850	84 3580	84 3310	99 108					
5	83 5030	83 4100	83 3810	83 3530	83 3310	101 108		5	83 5010	83 4090	83 3800	83 3520	83 3260	99 107					
10	82 5040	82 4110	83 3870	83 3640	84 3420	100 107		10	82 4960	82 4040	82 3750	82 3480	82 3210	98 106					
15	83 5260	83 4290	84 4040	84 3800	85 3570	100 107		15	80 4920	80 3990	80 3710	80 3460	81 3240	98 105					
20	85 5540	85 4530	85 4270	86 4020	86 3780	101 107		20	80 5010	80 4080	81 3840	81 3610	82 3380	97 104					
25	87 5910	86 4830	87 4560	87 4290	88 4040	101 107		25	82 5300	82 4320	82 4070	83 3820	83 3590	98 104					
30	89 6320	88 5180	89 4890	89 4610	90 4330	102 107		30	84 5670	84 4620	84 4350	85 4090	85 3840	98 104					
35	91 6870	90 5630	91 5320	91 5010	92 4720	103 107		35	86 6150	86 5010	86 4730	87 4450	87 4180	99 104					

Figure 7-2 (Sheet 20)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**10,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS							
VENR = 139 KIAS								VENR = 138 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	100 6440	100 5320	100 5030	101 4750	102 4480	118 125		-35	99 6270	99 5180	99 4900	100 4620	100 4360	117 124	
-30	101 6650	101 5510	101 5210	102 4930	102 4650	118 125		-30	100 6480	99 5360	100 5070	100 4790	101 4520	117 124	
-25	102 6880	101 5700	102 5400	102 5110	103 4820	119 125		-25	100 6700	100 5540	100 5250	101 4960	102 4680	118 124	
-20	103 7220	102 6000	103 5680	103 5380	104 5080	119 125		-20	102 7030	101 5830	102 5520	102 5230	103 4940	118 124	
-15	103 7690	104 6320	104 5990	105 5670	105 5360	120 125		-15	103 7390	102 6140	103 5820	103 5510	104 5210	118 124	
-10	103 8360	105 6660	105 6320	106 5990	106 5670	120 125		-10	103 7900	104 6470	104 6140	105 5820	105 5500	119 124	
-5	102 9150	106 7050	107 6690	107 6350	108 6010	120 125		-5	103 8640	105 6850	106 6500	106 6160	106 5830	119 124	
0	101 10020	108 7450	108 7080	109 6720	109 6370	121 125		0	102 9460	107 7240	107 6880	107 6520	108 6180	120 124	
5		109 7880	110 7490	110 7120	110 6750	121 125		5		108 7660	108 7280	109 6910	109 6540	120 124	
10		110 8470	111 7910	111 7520	111 7130	122 125		10		109 8080	110 7680	110 7300	110 6920	121 124	
15		109 9360	112 8370	112 7950	113 7550	122 125		15		109 8720	111 8120	111 7720	111 7320	121 124	
16			112 8990	113 8060	113 7650	122 125		16			112 8450	112 8030	112 7620	121 124	
18			112 9010	113 8280	114 7860	122 125		18			112 8770	113 8260	113 7840	122 124	

WEIGHT = 12000 LBS								WEIGHT = 11800 LBS								
VENR = 137 KIAS								VENR = 135 KIAS								
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-35	97 6080	97 5010	98 4740	98 4480	99 4220	116 123		-35	96 5890	96 4850	96 4590	97 4330	97 4070	115 122		
-30	98 6290	98 5190	98 4910	99 4640	99 4370	116 123		-30	96 6090	96 5020	97 4750	97 4480	98 4230	115 122		
-25	99 6490	98 5370	99 5080	99 4800	100 4530	116 123		-25	97 6300	97 5200	97 4920	98 4650	99 4380	115 122		
-20	100 6810	100 5640	100 5350	101 5060	101 4770	117 123		-20	98 6600	98 5460	99 5170	99 4890	100 4610	116 122		
-15	101 7170	101 5940	101 5630	102 5330	102 5040	117 123		-15	100 6940	99 5750	100 5450	100 5150	101 4860	116 122		
-10	103 7540	102 6270	103 5940	103 5630	104 5320	118 123		-10	101 7310	101 6060	101 5750	102 5440	102 5140	117 122		
-5	103 8080	104 6630	104 6290	105 5960	105 5640	118 123		-5	103 7720	102 6410	103 6080	103 5760	104 5440	117 122		
0	103 8840	105 7000	105 6650	106 6310	106 5970	119 123		0	103 8250	104 6770	104 6430	104 6090	105 5760	118 122		
5	102 9670	106 7400	107 7030	107 6670	108 6320	119 123		5	103 9020	105 7160	105 6790	106 6440	106 6100	118 122		
10		108 7810	108 7420	108 7050	109 6680	119 123		10	102 9850	106 7550	107 7170	107 6800	107 6440	118 122		
15		109 8250	109 7850	110 7450	110 7070	120 123		15		107 7970	108 7580	108 7190	108 6820	109 6460	119 122	
20		110 9020	111 8390	111 7970	111 7560	120 123		20		109 8520	109 8100	110 7690	110 7300	110 6920	119 122	
22			112 8620	112 8200	112 7780	121 123		22		110 8750	110 8320	110 7910	111 7500	111 7120	120 122	
								24		110 9130	111 8560	111 8130	111 7720	112 7320	120 122	

WEIGHT = 11600 LBS								WEIGHT = 11400 LBS							
VENR = 134 KIAS								VENR = 133 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	94 5730	94 4710	95 4450	95 4190	96 3950	114 121		-35	93 5570	93 4570	93 4320	94 4070	95 3830	113 120	
-30	95 5900	95 4860	95 4590	96 4330	97 4080	114 121		-30	93 5730	93 4720	94 4460	95 4200	95 3960	113 120	
-25	95 6100	95 5030	96 4760	97 4490	97 4230	114 121		-25	94 5900	94 4860	94 4600	95 4340	96 4090	113 120	
-20	97 6400	97 5290	97 5000	98 4720	98 4450	114 121		-20	95 6200	95 5110	96 4840	96 4570	97 4310	113 120	
-15	98 6720	98 5560	98 5270	99 4980	99 4700	115 121		-15	97 6510	96 5380	97 5090	97 4810	98 4530	114 120	
-10	100 7070	99 5860	100 5550	100 5250	101 4960	115 121		-10	98 6840	98 5660	98 5360	99 5070	99 4790	114 120	
-5	101 7470	101 6200	101 5870	102 5560	102 5250	116 121		-5	100 7220	99 5990	100 5670	100 5370	101 5070	115 120	
0	103 7880	102 6540	102 6210	103 5880	103 5560	116 121		0	101 7620	100 6320	101 5990	101 5670	102 5360	115 120	
5	104 8390	103 6910	104 6560	104 6220	105 5880	117 121		5	103 8040	102 6680	102 6330	103 6000	103 5670	116 120	
10	103 9160	105 7290	105 6920	105 6560	106 6220	117 121		10	104 8490	103 7040	103 6680	104 6330	104 5990	116 120	
15	102 10030	106 7700	106 7310	107 6940	107 6570	118 121		15	103 9300	104 7430	105 7050	105 6690	105 6340	116 120	
20		108 8220	108 7810	108 7420	108 7030	118 121		20	102 10380	106 7930	106 7530	107 7150	107 6780	117 120	
24		109 8680	109 8260	109 7840	110 7440	118 121		25		108 8490	108 8080	108 7670	109 7270	117 120	
25		109 8800	110 8370	110 7950	110 7550	119 121		26		108 8610	108 8190	109 7770	109 7370	117 120	
26		110 8930	110 8490	110 8070	110 7660	119 121		29		109 9010	109 8570	110 8140	110 7720	118 120	

Figure 7-2 (Sheet 21)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
10,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS							
VENR = 130 KIAS								VENR = 127 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	91 5370	91 4400	91 4090	92 3850	92 3610	111 119		-35	91 5350	91 4380	91 4080	91 3790	91 3510	109 118	
-30	90 5410	91 4440	91 4190	92 3950	93 3720	111 118		-30	90 5380	90 4410	90 4110	90 3820	90 3530	109 117	
-25	91 5570	91 4580	92 4330	92 4080	93 3840	111 118		-25	90 5410	90 4430	90 4130	90 3840	90 3580	109 117	
-20	92 5810	92 4780	93 4520	93 4260	94 4010	111 118		-20	88 5390	88 4420	89 4170	90 3930	90 3700	108 116	
-15	93 6090	93 5020	94 4750	94 4480	95 4220	111 118		-15	89 5620	89 4620	89 4360	91 4110	91 3870	108 115	
-10	95 6400	94 5280	95 5000	96 4720	96 4450	112 118		-10	91 5870	90 4830	91 4560	92 4300	92 4050	108 115	
-5	96 6750	96 5580	96 5280	97 4990	97 4710	112 118		-5	92 6190	92 5100	92 4820	93 4550	94 4280	109 115	
0	98 7120	97 5890	98 5580	98 5280	99 4980	113 118		0	94 6520	93 5380	94 5090	94 4800	95 4530	109 115	
5	99 7500	99 6220	99 5890	100 5580	100 5270	113 118		5	95 6870	95 5670	95 5370	96 5070	96 4780	110 115	
10	101 7900	100 6550	100 6210	101 5880	101 5560	114 118		10	96 7220	96 5970	96 5660	97 5350	97 5050	110 115	
15	102 8320	101 6910	102 6560	102 6210	102 5880	114 118		15	98 7600	97 6290	98 5960	98 5650	98 5350	111 115	
20	104 8870	103 7370	103 7000	104 6630	104 6280	114 118		20	100 8090	99 6710	99 6360	100 6020	100 5690	111 115	
25	104 8890	104 7890	105 7490	105 7110	105 6730	115 118		25	101 8640	100 7170	101 6800	101 6440	102 6090	112 115	
29		106 8360	106 7940	107 7540	107 7140	115 118		30	104 9320	102 7730	103 7340	103 6960	103 6580	112 115	
30		106 8510	107 8090	107 7680	107 7280	116 118		33	105 9920	104 8170	104 7760	104 7360	105 6970	113 115	
33		108 9010	108 8570	108 8140	109 7710	116 118									

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS							
VENR = 124 KIAS								VENR = 120 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	91 5340	91 4380	91 4080	91 3790	91 3520	108 117		-35	91 5330	91 4380	91 4090	91 3800	91 3530	106 116	
-30	91 5360	91 4400	91 4100	91 3810	91 3530	107 116		-30	91 5360	91 4400	91 4110	91 3820	91 3540	106 115	
-25	90 5390	90 4420	90 4120	90 3830	90 3550	107 116		-25	90 5380	90 4420	90 4120	90 3840	90 3560	105 115	
-20	88 5350	88 4390	88 4090	88 3800	88 3520	107 115		-20	88 5340	88 4380	88 4080	88 3800	88 3520	105 114	
-15	87 5310	87 4350	87 4050	87 3810	88 3580	106 114		-15	87 5290	87 4340	87 4040	87 3750	87 3470	104 113	
-10	87 5420	87 4440	87 4190	88 3950	89 3710	106 113		-10	85 5250	85 4290	85 4000	85 3710	86 3450	104 112	
-5	88 5660	88 4650	88 4390	89 4140	90 3890	106 113		-5	84 5220	84 4270	85 4020	85 3790	86 3560	103 111	
0	89 5950	89 4890	90 4620	90 4360	91 4100	106 113		0	85 5440	85 4460	86 4200	86 3960	87 3720	103 110	
5	91 6260	91 5150	91 4870	92 4600	92 4330	107 113		5	86 5690	86 4670	87 4410	87 4150	88 3900	103 110	
10	92 6580	92 5420	92 5130	93 4840	93 4560	107 113		10	88 5980	88 4910	88 4630	89 4370	89 4110	104 110	
15	94 6920	93 5710	94 5410	94 5110	94 4820	108 113		15	89 6290	89 5170	89 4880	90 4610	90 4340	104 110	
20	95 7360	95 6080	95 5760	96 5440	96 5140	108 113		20	91 6680	90 5500	91 5200	91 4900	92 4620	105 110	
25	97 7860	96 6490	97 6150	97 5820	98 5500	109 113		25	93 7120	92 5860	93 5550	93 5240	93 4940	105 110	
30	99 8450	98 6990	99 6630	99 6280	99 5930	109 113		30	95 7650	94 6300	94 5970	95 5640	95 5320	106 110	
33	101 8930	100 7390	100 7010	100 6630	101 6270	110 113		33	96 8070	95 6650	96 6300	96 5960	97 5620	106 110	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 117 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	92 5340	92 4400	92 4100	92 3820	92 3540	104 115		-35	92 5360	92 4420	92 4130	92 3840	92 3570	102 114	
-30	91 5360	91 4410	91 4120	91 3830	91 3560	104 114		-30	91 5380	91 4440	91 4140	91 3860	91 3580	102 113	
-25	90 5380	90 4430	90 4130	90 3850	90 3570	104 114		-25	90 5390	90 4450	90 4150	90 3870	90 3590	102 113	
-20	89 5330	89 4390	89 4090	89 3800	89 3530	103 113		-20	89 5340	89 4400	89 4100	89 3820	89 3540	101 112	
-15	87 5280	87 4340	87 4040	87 3750	87 3480	102 112		-15	87 5280	87 4340	87 4050	87 3760	87 3490	101 110	
-10	86 5230	86 4290	86 3990	86 3710	86 3430	102 111		-10	86 5230	86 4290	86 4000	86 3710	86 3440	100 109	
-5	84 5180	84 4230	84 3940	84 3650	84 3380	101 109		-5	84 5170	84 4230	84 3940	84 3650	84 3380	99 108	
0	83 5130	83 4180	83 3890	83 3630	84 3410	101 108		0	83 5110	83 4170	83 3880	83 3600	83 3330	99 107	
5	82 5200	82 4250	83 4000	83 3760	84 3530	100 107		5	81 5060	81 4120	81 3830	81 3550	81 3280	98 106	
10	83 5420	83 4430	84 4180	84 3930	85 3690	100 107		10	80 5010	80 4080	80 3800	81 3570	81 3340	98 105	
15	85 5680	84 4650	85 4390	86 4130	86 3890	101 107		15	80 5140	80 4190	81 3940	81 3710	82 3480	97 104	
20	86 6030	86 4940	87 4660	87 4390	88 4130	101 107		20	82 5410	81 4410	82 4160	83 3910	83 3670	98 104	
25	88 6420	88 5260	88 4970	89 4690	89 4410	102 107		25	83 5750	83 4700	84 4430	84 4170	85 3920	98 104	
30	90 6880	90 5650	90 5340	90 5040	91 4750	103 107		30	85 6160	85 5040	85 4760	86 4480	86 4210	99 104	
33	92 7250	91 5960	91 5640	92 5320	92 5010	103 107		33	87 6490	86 5310	87 5010	87 4720	88 4440	99 104	

Figure 7-2 (Sheet 22)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**11,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

HEIGHT = 12375 LBS								VENR = 139 KIAS								HEIGHT = 12200 LBS								VENR = 138 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	10 KTS	V1 DIST			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2													
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT					
-35	102	7030	101	5820	102	5520	102	5220	103	4930	119	125	-35	100	6840	100	5670	101	5360	101	5070	102	4790	118	124						
-30	102	7260	102	6030	102	5710	103	5410	103	5110	119	125	-30	101	7070	101	5860	101	5550	102	5250	102	4960	118	124						
-25	103	7590	103	6280	103	5950	104	5640	104	5330	119	125	-25	102	7350	101	6100	102	5790	102	5480	103	5180	118	124						
-20	102	8180	104	6610	105	6280	105	5950	105	5630	120	125	-20	103	7740	103	6430	103	6100	104	5780	104	5460	119	124						
-15	102	8890	105	6970	106	6620	106	6280	107	5940	120	125	-15	102	8400	104	6780	104	6430	105	6100	105	5770	119	124						
-10	101	9680	107	7360	107	6990	107	6630	108	6280	120	125	-10	101	9150	105	7150	106	6790	106	6440	107	6100	119	124						
-5			108	7790	108	7410	109	7030	109	6670	121	125	-5	101	10030	107	7570	107	7190	108	6830	108	6470	120	124						
0			109	8270	110	7840	110	7450	110	7070	121	125	0			108	8010	108	7620	109	7230	109	6860	120	124						
5			108	9120	111	8300	111	7890	112	7490	122	125	5			109	8510	110	8050	110	7650	110	7260	121	124						
10					111	9060	113	8340	113	7920	122	125	10			108	9390	111	8520	111	8100	112	7680	121	124						
11					111	9250	113	8440	113	8020	122	125	13					111	8960	112	8380	112	7950	121	124						
13					113	8640	114	8210	114	8210	122	125	15					113	8600	113	8170	113	7720	122	124						

HEIGHT = 12000 LBS								VENR = 137 KIAS								HEIGHT = 11800 LBS								VENR = 136 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	10 KTS	V1 DIST			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2													
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT					
-35	99	6640	99	5490	99	5190	100	4910	100	4630	117	123	-35	97	6440	97	5310	98	5030	98	4740	99	4470	115	122						
-30	99	6860	99	5680	100	5380	100	5080	101	4800	117	123	-30	98	6640	98	5490	98	5200	99	4910	99	4640	116	122						
-25	100	7120	100	5910	100	5600	101	5300	102	5000	117	123	-25	99	6900	98	5720	99	5420	100	5120	100	4840	116	122						
-20	102	7490	101	6220	102	5900	102	5590	103	5280	117	123	-20	100	7260	100	6020	100	5710	101	5400	101	5100	116	122						
-15	103	7880	103	6560	103	6220	103	5890	104	5570	118	123	-15	102	7630	101	6340	101	6010	102	5700	102	5380	117	122						
-10	102	8560	104	6920	104	6570	105	6220	105	5890	118	123	-10	103	8040	102	6690	103	6350	103	6010	104	5690	117	122						
-5	102	9390	105	7320	106	6950	106	6600	106	6250	119	123	-5	102	8750	104	7080	104	6720	105	6370	105	6030	118	122						
0	101	10290	107	7740	107	7360	107	6990	108	6620	119	123	0	102	9600	105	7480	105	7110	106	6750	106	6390	118	122						
5			108	8180	108	7780	109	7390	109	7010	120	123	5	101	10510	106	7910	107	7520	107	7130	107	6760	118	122						
10			109	8650	110	8230	110	7820	110	7420	120	123	10			108	8350	108	7940	108	7550	109	7160	119	122						
15					111	8730	111	8300	111	7880	120	123	15			109	8860	109	8430	110	8010	110	7600	119	122						
17					111	9010	112	8520	112	8090	121	123	17			109	9250	110	8650	110	8220	111	7800	119	122						
													19					111	8880	111	8440	111	8020	120	122						

HEIGHT = 11600 LBS								VENR = 134 KIAS								HEIGHT = 11400 LBS								VENR = 133 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	10 KTS	V1 DIST			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2													
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT					
-35	96	6230	96	5140	96	4860	97	4590	97	4320	114	121	-35	94	6030	94	4970	95	4700	95	4430	96	4170	113	120						
-30	96	6440	96	5320	97	5030	97	4760	98	4480	114	121	-30	95	6230	95	5140	95	4860	96	4590	96	4330	113	120						
-25	97	6680	97	5530	97	5240	98	4950	99	4670	115	121	-25	96	6480	95	5350	96	5070	96	4780	97	4510	113	120						
-20	99	7030	98	5820	99	5520	99	5220	100	4930	115	121	-20	97	6800	97	5630	97	5330	98	5040	98	4750	114	120						
-15	100	7390	99	6130	100	5810	100	5500	101	5200	115	121	-15	98	7150	98	5930	98	5610	99	5310	99	5020	114	120						
-10	101	7780	101	6470	101	6130	102	5810	102	5490	116	121	-10	100	7530	99	6250	100	5920	100	5610	101	5300	115	120						
-5	103	8220	102	6840	103	6490	103	6150	103	5820	116	121	-5	101	7950	101	6610	101	6270	102	5940	102	5610	115	120						
0	103	8940	104	7230	104	6870	104	6510	105	6160	117	121	0	103	8390	102	6980	102	6630	103	6280	103	5940	116	120						
5	102	9780	105	7640	105	7260	106	6880	106	6520	117	121	5	103	9070	103	7370	104	7000	104	6640	104	6290	116	120						
10			106	8060	106	7670	107	7280	107	6900	118	121	10	102	9930	105	7780	105	7400	105	7020	106	6650	116	120						
15			107	8550	108	8130	108	7730	108	7330	118	121	15			106	8250	106	7840	107	7450	107	7060	117	120						
19			109	9000	109	8560	109	8140	110	7720	118	121	20			107	8800	108	8370	108	7950	108	7540	117	120						
20			109	9120	109	8680	110	8250	110	7830	118	121	21			108	8910	108	8480	108	8050	109	7640	117	120						
21			109	9290	110	8800	110	8360	110	7940	119	121	25			109	9410	109	8950	110	8510	110	8080	118	120						
													26					110	9080	110	8630	110	8200	118	120						

Figure 7-2 (Sheet 23)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
11,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS																	
		ZERO WIND		HEAD WINDS					ZERO WIND		HEAD WINDS														
TEMP DEG C	TAILWIND 10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	TEMP DEG C	TAILWIND 10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS										
-35	91	5690	91	4670	92	4410	92	4160	93	3920	111	118	-35	90	5490	90	4500	90	4190	90	3890	90	3650	109	117
-30	92	5850	92	4820	92	4550	93	4290	93	4040	111	118	-30	89	5530	89	4530	89	4230	90	3980	90	3740	108	116
-25	92	6060	92	4990	93	4720	93	4450	94	4200	111	118	-25	89	5610	89	4610	89	4360	90	4110	91	3860	108	116
-20	94	6370	94	5260	94	4970	95	4700	95	4420	111	118	-20	90	5860	90	4820	90	4550	91	4290	91	4040	108	115
-15	95	6690	95	5530	95	5230	96	4940	96	4660	112	118	-15	91	6130	91	5050	91	4780	92	4510	92	4250	109	115
-10	96	7030	96	5820	97	5510	97	5210	98	4920	112	118	-10	92	6450	92	5320	93	5030	93	4750	94	4480	109	115
-5	98	7420	98	6150	98	5830	98	5520	99	5210	113	118	-5	94	6800	93	5620	94	5320	94	5020	95	4740	110	115
0	100	7830	99	6500	99	6160	100	5840	100	5520	113	118	0	95	7170	95	5930	95	5610	96	5310	96	5010	110	115
5	101	8260	100	6860	101	6510	101	6170	101	5830	114	118	5	97	7550	96	6250	97	5920	97	5610	97	5290	110	115
10	102	8700	101	7240	102	6870	102	6510	103	6170	114	118	10	98	7950	97	6590	98	6250	98	5920	99	5590	111	115
15	103	9330	103	7670	103	7280	104	6910	104	6540	114	118	15	100	8400	99	6980	99	6620	100	6270	100	5930	111	115
20	102	10420	104	8170	105	7760	105	7370	105	6980	115	118	20	101	8940	100	7430	101	7050	101	6680	101	6320	112	115
25			106	8730	106	8300	107	7880	107	7470	115	118	25	103	9540	102	7930	102	7530	103	7140	103	6760	112	115
26			106	8850	107	8410	107	7990	107	7580	115	118	29	104	10480	104	8470	104	8040	104	7630	104	7230	113	115
29			108	9330	108	8880	108	8440	108	8000	116	118	30			104	8620	104	8200	105	7780	105	7370	113	115
													31			105	8790	105	8360	105	7930	105	7520	113	115

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS																	
		ZERO WIND		HEAD WINDS					ZERO WIND		HEAD WINDS														
TEMP DEG C	TAILWIND 10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	TEMP DEG C	TAILWIND 10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS										
-35	90	5470	90	4490	90	4180	90	3890	90	3600	107	116	-35	90	5460	90	4490	90	4180	90	3890	90	3610	105	115
-30	89	5510	89	4520	89	4210	89	3910	89	3630	107	115	-30	89	5490	89	4510	89	4210	89	3910	89	3630	105	114
-25	88	5510	88	4520	88	4210	88	3920	88	3630	106	115	-25	88	5500	88	4520	88	4210	88	3910	88	3630	105	113
-20	87	5480	87	4490	87	4210	88	3960	88	3730	106	114	-20	87	5460	87	4470	87	4170	87	3870	87	3590	104	112
-15	87	5650	87	4640	88	4380	88	4130	89	3880	106	113	-15	85	5410	85	4430	85	4120	85	3830	86	3600	104	111
-10	88	5890	88	4840	89	4580	89	4310	90	4060	106	113	-10	84	5430	84	4450	85	4190	86	3950	86	3710	103	110
-5	90	6210	89	5110	90	4830	90	4550	91	4290	106	113	-5	85	5670	85	4650	86	4390	86	4130	87	3890	103	110
0	91	6540	91	5390	91	5100	92	4810	92	4530	107	113	0	87	5940	87	4880	87	4610	88	4340	88	4090	103	110
5	92	6880	92	5680	93	5370	93	5080	93	4790	107	113	5	88	6250	88	5140	88	4850	89	4580	89	4310	104	110
10	94	7240	93	5980	94	5660	94	5350	95	5050	108	113	10	89	6570	89	5410	90	5110	90	4830	91	4550	104	110
15	95	7640	95	6330	95	5990	96	5670	96	5350	108	113	15	91	6930	90	5710	91	5410	91	5110	92	4810	105	110
20	97	8120	96	6730	97	6380	97	6040	97	5700	109	113	20	93	7360	92	6070	92	5750	93	5430	93	5120	105	110
25	99	8660	98	7170	98	6800	98	6440	99	6090	109	113	25	94	7830	94	6470	94	6130	94	5790	95	5470	106	110
30	101	9400	100	7790	100	7400	101	7010	101	6640	110	113	30	97	8490	96	7020	96	6650	96	6290	97	5950	106	110
31	102	9580	100	7940	101	7540	101	7150	101	6760	110	113	31	97	8650	96	7150	96	6770	97	6410	97	6060	107	110

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS																	
		ZERO WIND		HEAD WINDS					ZERO WIND		HEAD WINDS														
TEMP DEG C	TAILWIND 10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	TEMP DEG C	TAILWIND 10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2										
	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS		KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS FT	KIAS										
-35	90	5460	90	4500	90	4190	90	3900	90	3620	104	114	-35	90	5480	90	4510	90	4210	90	3920	90	3640	102	112
-30	89	5490	89	4520	89	4220	89	3920	89	3640	103	113	-30	89	5500	89	4530	89	4230	89	3940	89	3660	101	112
-25	88	5490	88	4520	88	4210	88	3920	88	3630	103	112	-25	88	5500	88	4530	88	4230	88	3930	88	3650	101	111
-20	87	5440	87	4470	87	4170	87	3870	87	3590	102	111	-20	87	5440	87	4480	87	4170	87	3880	87	3600	100	110
-15	85	5390	85	4420	85	4120	85	3820	85	3540	102	110	-15	85	5390	85	4420	85	4120	85	3830	85	3550	100	109
-10	84	5350	84	4370	84	4070	84	3780	84	3500	101	109	-10	84	5330	84	4370	84	4070	84	3780	84	3500	99	108
-5	82	5300	82	4320	82	4030	83	3790	84	3560	101	108	-5	82	5270	82	4310	82	4010	82	3720	82	3440	99	107
0	82	5420	82	4430	83	4180	84	3930	84	3690	100	107	0	81	5220	81	4260	81	3960	81	3670	81	3390	98	106
5	83	5650	83	4630	84	4370	85	4110	85	3870	100	107	5	80	5180	80	4210	80	3960	81	3720	81	3490	98	105
10	85	5940	85	4870	85	4600	86	4330	86	4070	101	107	10	80	5360	80	4380	81	4120	81	3880	82	3640	97	104
15	86	6250	86	5140	87	4850	87	4570	88	4300	101	107	15	82	5610	81	4590	82	4330	83	4070	83	3830	98	104
20	88	6630	88	5450	88	5150	88	4860	89	4580	102	107	20	83	5950	83	4870	83	4590	84	4320	84	4060	98	104
25	90	7050	89	5800	90	5490	90	5180	90	4880	102	107	25	85	6310	85	5170	85	4880	85	4600	86	4330	99	104
30	92	7630	91	6280	92	5950	92	5620	92	5300	103	107	30	87	6820	87	5600	87	5290	87	4980	88	4690	99	104
31	93	7770	92	6400	92	6060	92	5720	93	5400	103	107	31	88	6940	87	5690	88	5380	88	5070	88	4780	100	104

Figure 7-2 (Sheet 24)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**12,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								VENR = 139 KIAS								WEIGHT = 12200 LBS								VENR = 138 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		H E A D W I N D S						VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		H E A D W I N D S						VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	103	7890	103	6390	103	6060	104	5740	104	5420	119	125	-35	102	7480	102	6210	102	5890	103	5570	103	5270	118	124						
-30	103	8080	103	6610	104	6270	104	5940	105	5620	119	125	-30	103	7720	102	6420	103	6090	103	5770	104	5460	118	124						
-25	102	8710	104	6990	105	6580	105	6240	106	5900	120	125	-25	102	8240	103	6740	104	6390	104	6060	105	5730	119	124						
-20	101	9470	106	7310	106	6940	107	6590	107	6240	120	125	-20	101	8960	104	7100	105	6750	105	6400	106	6060	119	124						
-15	100	10290	107	7700	107	7320	108	6950	108	6590	121	125	-15	101	9740	106	7480	106	7110	106	6750	107	6390	120	124						
-10			108	8140	109	7740	109	7350	109	6970	121	125	-10	100	10630	107	7910	107	7520	108	7140	108	6770	120	124						
-5			108	8860	110	8200	110	7800	111	7400	121	125	-5			108	8370	109	7960	109	7570	109	7180	120	124						
0			107	9800	111	8820	112	8270	112	7850	122	125	0			108	9160	110	8440	110	8030	111	7620	121	124						
5							113	8760	113	8320	122	125	5					110	9090	112	8490	112	8070	121	124						
7							113	9120	114	8520	122	125	7					110	9490	112	8690	112	8260	121	124						
													9							113	8900	113	8460	121	124						

WEIGHT = 12000 LBS								VENR = 137 KIAS								WEIGHT = 11800 LBS								VENR = 136 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		H E A D W I N D S						VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		H E A D W I N D S						VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	100	7250	100	6010	101	5700	101	5390	102	5090	117	123	-35	99	7030	98	5820	99	5510	100	5210	100	4920	116	122						
-30	101	7480	101	6220	101	5890	102	5580	102	5270	117	123	-30	99	7250	99	6020	100	5700	100	5390	101	5100	116	122						
-25	102	7840	102	6520	102	6180	103	5860	103	5540	118	123	-25	101	7590	100	6310	101	5980	101	5660	102	5350	116	122						
-20	102	8400	103	6870	103	6520	104	6180	104	5850	118	123	-20	102	7990	101	6650	102	6310	102	5980	103	5650	117	122						
-15	101	9120	104	7240	105	6880	105	6520	105	6180	118	123	-15	102	8530	103	7000	103	6650	103	6300	104	5970	117	122						
-10	101	9960	105	7850	106	7270	106	6900	107	6540	119	123	-10	101	9300	104	7390	104	7020	105	6660	105	6310	118	122						
-5			107	8090	107	7700	108	7310	108	6930	119	123	-5	101	10200	105	7820	106	7440	106	7060	106	6690	118	122						
0			108	8570	109	8160	109	7750	109	7350	120	123	0			107	8280	107	7880	107	7480	108	7090	118	122						
5			108	9340	110	8630	110	8210	110	7790	120	123	5			108	8750	108	8330	109	7920	109	7510	119	122						
9					111	9060	111	8590	111	8160	120	123	10			108	9500	110	8820	110	8380	110	7960	119	122						
10					110	9270	111	8690	112	8250	120	123	12					110	9030	110	8590	111	8150	119	122						
12					112	8900	112	8460	121	123	14							111	9250	111	8800	111	8360	120	122						

WEIGHT = 11600 LBS								VENR = 134 KIAS								WEIGHT = 11400 LBS								VENR = 133 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		H E A D W I N D S						VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		H E A D W I N D S						VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	97	6800	97	5630	97	5330	98	5040	99	4750	115	121	-35	96	6590	95	5450	96	5150	97	4860	97	4590	113	120						
-30	98	7020	97	5820	98	5510	99	5210	99	4920	115	121	-30	96	6800	96	5620	96	5320	97	5030	98	4750	114	120						
-25	99	7350	99	6100	99	5780	100	5470	100	5170	115	121	-25	97	7110	97	5890	98	5580	98	5280	99	4990	114	120						
-20	100	7730	100	6430	100	6100	101	5770	101	5460	116	121	-20	99	7480	98	6210	99	5890	99	5570	100	5260	114	120						
-15	102	8130	101	6770	102	6420	102	6090	102	5760	116	121	-15	100	7870	100	6540	100	6200	100	5870	101	5550	115	120						
-10	102	8670	102	7140	103	6780	103	6430	104	6090	116	121	-10	101	8290	101	6900	101	6550	102	6210	102	5870	115	120						
-5	102	9500	104	7560	104	7180	105	6810	105	6450	117	121	-5	102	8830	102	7300	103	6930	103	6570	103	6220	116	120						
0	101	10430	105	8000	105	7600	106	7220	106	6840	117	121	0	102	9690	104	7720	104	7340	104	6960	105	6590	116	120						
5			106	8450	107	8040	107	7640	107	7240	118	121	5	101	10620	105	8160	105	7750	106	7360	106	6980	117	120						
10			108	8940	108	8510	108	8090	109	7680	118	121	10			106	8620	106	8200	107	7790	107	7390	117	120						
14			108	9490	109	8920	109	8490	110	8060	118	121	15			107	9160	108	8710	108	8280	108	7860	117	120						
15			108	9700	109	9040	110	8590	110	8160	118	121	17			108	9380	108	8930	109	8490	109	8060	117	120						
17					110	9270	110	8810	110	8370	119	121	20					109	9280	109	8830	110	8380	118	120						
													21					109	9400	110	8940	110	8490	118	120						

Figure 7-2 (Sheet 25)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
12,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

HEIGHT = 11000 LBS								VENR = 131 KIAS								HEIGHT = 10500 LBS								VENR = 127 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	92	6160	92	5080	93	4800	93	4530	94	4270	111	118	-35	89	5710	89	4690	89	4430	90	4180	91	3930	108	116						
-30	93	6360	93	5250	93	4970	94	4690	95	4420	111	118	-30	89	5880	89	4840	90	4570	90	4310	91	4060	108	116						
-25	94	6660	94	5500	94	5200	95	4920	96	4640	111	118	-25	90	6110	90	5030	91	4760	91	4490	92	4230	108	115						
-20	95	6990	95	5790	96	5480	96	5180	97	4890	112	118	-20	91	6410	91	5290	92	5010	92	4730	93	4460	109	115						
-15	97	7350	96	6090	97	5780	97	5460	98	5160	112	118	-15	93	6730	92	5560	93	5270	93	4970	94	4690	109	115						
-10	98	7740	98	6430	98	6090	99	5770	99	5450	113	118	-10	94	7090	94	5860	94	5550	95	5250	95	4950	110	115						
-5	100	8170	99	6790	99	6450	100	6110	100	5770	113	118	-5	96	7480	95	6190	96	5870	96	5550	96	5240	110	115						
0	101	8630	100	7180	101	6820	101	6460	102	6120	114	118	0	97	7890	96	6540	97	6200	97	5870	98	5550	111	115						
5	103	9100	102	7580	102	7200	102	6830	103	6470	114	118	5	98	8310	98	6900	98	6550	98	6200	99	5870	111	115						
10	102	9960	103	8010	103	7620	104	7230	104	6850	114	118	10	100	8770	99	7290	99	6920	100	6560	100	6210	111	115						
15			104	8500	105	8080	105	7680	105	7280	115	118	15	101	9290	100	7730	101	7340	101	6960	101	6590	112	115						
20			106	9050	106	8600	106	8170	107	7750	115	118	20	103	9860	102	8210	102	7800	102	7410	103	7020	112	115						
21			106	9160	106	8710	107	8280	107	7860	115	118	25			103	8770	104	8340	104	7920	104	7510	113	115						
25					108	9200	108	8750	108	8310	116	118	26			104	8930	104	8490	104	8070	105	7650	113	115						
26					108	9380	108	8920	109	8470	116	118	29			105	9460	105	9000	106	8550	106	8110	113	115						

HEIGHT = 10000 LBS								VENR = 124 KIAS								HEIGHT = 9500 LBS								VENR = 121 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	88	5610	88	4600	88	4290	88	3990	88	3690	106	114	-35	88	5600	88	4600	88	4280	88	3980	88	3690	105	113						
-30	87	5650	87	4640	87	4320	87	4020	88	3770	106	114	-30	87	5630	87	4630	87	4310	87	4010	87	3720	104	113						
-25	86	5650	86	4640	87	4380	88	4130	88	3880	106	113	-25	86	5620	86	4610	86	4290	86	3990	86	3700	104	112						
-20	87	5890	87	4840	88	4580	88	4310	89	4060	106	113	-20	85	5580	85	4570	85	4250	85	3990	86	3750	103	111						
-15	88	6150	88	5060	89	4790	89	4520	90	4250	106	113	-15	84	5650	85	4640	85	4380	86	4130	86	3880	103	110						
-10	90	6470	90	5340	90	5040	91	4760	91	4480	106	113	-10	85	5900	85	4850	86	4580	87	4310	87	4060	103	110						
-5	91	6820	91	5630	91	5330	92	5030	92	4740	107	113	-5	87	6200	87	5100	87	4820	88	4540	88	4280	103	110						
0	93	7190	92	5940	93	5630	93	5320	94	5020	107	113	0	88	6520	88	5370	89	5080	89	4790	90	4520	104	110						
5	94	7570	94	6270	94	5940	94	5610	95	5300	108	113	5	90	6860	89	5660	90	5360	90	5060	91	4770	104	110						
10	95	7980	95	6610	95	6270	96	5930	96	5600	108	113	10	91	7230	91	5970	91	5650	91	5340	92	5040	105	110						
15	97	8440	96	7000	97	6640	97	6290	97	5950	109	113	15	93	7640	92	6320	92	5980	93	5660	93	5340	105	110						
20	99	8950	98	7430	98	7050	98	6680	99	6320	109	113	20	94	8100	93	6700	94	6350	94	6010	95	5680	106	110						
25	100	9540	99	7930	99	7530	100	7140	100	6760	110	113	25	96	8620	95	7140	95	6770	96	6410	96	6060	106	110						
29	102	10290	101	8540	101	8120	102	7700	102	7290	110	113	29	98	9270	97	7680	97	7290	97	6900	98	6530	107	110						

HEIGHT = 9000 LBS								VENR = 117 KIAS								HEIGHT = 8500 LBS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	88	5590	88	4600	88	4290	88	3990	88	3700	103	112	-35	88	5590	88	4610	88	4300	88	4000	88	3720	101	111						
-30	88	5620	88	4630	88	4320	88	4010	88	3720	103	112	-30	88	5630	88	4640	88	4330	88	4030	88	3740	101	111						
-25	86	5600	86	4600	86	4290	86	3990	86	3700	102	111	-25	86	5600	86	4610	86	4300	86	4000	86	3710	100	110						
-20	85	5550	85	4560	85	4240	85	3940	85	3650	102	110	-20	85	5540	85	4550	85	4250	85	3950	85	3660	100	109						
-15	83	5510	83	4510	83	4200	83	3900	83	3610	101	109	-15	84	5500	84	4510	84	4200	84	3900	84	3610	99	108						
-10	82	5470	82	4470	82	4200	83	3950	84	3710	101	108	-10	82	5440	82	4460	82	4150	82	3850	82	3560	99	107						
-5	83	5640	83	4620	83	4360	84	4110	84	3860	100	107	-5	81	5390	81	4400	81	4090	81	3800	81	3540	98	106						
0	84	5900	84	4840	84	4570	85	4300	85	4050	100	107	0	79	5360	80	4380	80	4130	81	3880	81	3650	97	105						
5	85	6200	85	5100	85	4810	86	4530	86	4270	101	107	5	80	5590	81	4570	81	4310	82	4060	82	3810	97	104						
10	86	6520	86	5360	87	5070	87	4780	88	4500	101	107	10	82	5850	82	4790	82	4520	83	4260	83	4000	98	104						
15	88	6890	88	5670	88	5360	88	5060	89	4770	102	107	15	83	6170	83	5060	83	4780	84	4500	84	4230	98	104						
20	90	7290	89	6010	89	5690	90	5370	90	5070	102	107	20	85	6530	84	5360	85	5060	85	4770	86	4490	99	104						
25	91	7750	90	6400	91	6060	91	5730	92	5400	103	107	25	86	6930	86	5700	86	5390	87	5080	87	4790	99	104						
29	93	8320	92	6870	93	6510	93	6160	93	5810	103	107	29	88	7430	88	6110	88	5780	89	5460	89	5140	100	104						

Figure 7-2 (Sheet 26)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**13,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								VENR = 140 KIAS								WEIGHT = 12200 LBS								VENR = 139 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	102	8780	104	7000	105	6650	105	6300	106	5970	120	125	-35	102	8300	103	6810	103	6460	104	6120	104	5790								
-30	101	9270	105	7260	105	6890	106	6540	106	6190	120	125	-30	101	8780	104	7050	104	6700	104	6350	105	6010								
-25	100	10090	106	7650	106	7270	107	6910	107	6540	120	125	-25	100	9550	105	7440	105	7070	106	6710	106	6350								
-20			107	8080	108	7680	108	7300	108	6920	121	125	-20	100	10390	106	7850	106	7460	107	7090	107	6720								
-15			108	8600	109	8110	109	7710	110	7310	121	125	-15			107	8280	108	7870	108	7480	108	7100								
-10			107	9460	110	8570	110	8150	111	7740	121	125	-10			108	8850	109	8320	109	7910	110	7510								
-5					109	9490	112	8660	112	8230	122	125	-5			107	9830	110	8840	111	8400	111	7980								
0							112	9470	113	8740	122	125	0					109	9830	112	8910	112	8470								
1							112	9670	114	8840	122	125	1						112	9020	112	8570	121	124							
													3							112	9350	113	8770	121	124						

WEIGHT = 12000 LBS								VENR = 137 KIAS								WEIGHT = 11800 LBS								VENR = 136 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	102	7920	101	6590	102	6250	102	5920	103	5600	117	123	-35	100	7670	100	6380	100	6050	101	5720	101	5410								
-30	102	8230	102	6830	102	6480	103	6140	103	5810	118	123	-30	101	7940	100	6600	101	6270	101	5940	102	5610								
-25	101	8950	103	7200	104	6840	104	6480	105	6140	118	123	-25	102	8360	102	6960	102	6610	103	6260	103	5930								
-20	100	9740	105	7590	105	7220	105	6850	106	6490	119	123	-20	101	9100	103	7340	103	6970	104	6620	104	6270								
-15	100	10590	106	8010	106	7610	106	7230	107	6850	119	123	-15	100	9910	104	7740	105	7360	105	6980	105	6620								
-10			107	8460	107	8040	108	7640	108	7250	119	123	-10	100	10820	105	8170	106	7770	106	7380	107	7000								
-5			108	9070	109	8540	109	8120	109	7700	120	123	-5			107	8660	107	8240	108	7830	108	7430								
0					110	9050	110	8610	111	8170	120	123	0			108	9250	109	8740	109	8310	109	7890								
3					110	9610	111	8910	111	8460	120	123	3					110	9240	110	8790	110	8350								
5							112	9120	112	8570	120	123	5					110	9370	110	8900	111	8450								
6							112	9220	112	8770	121	123	6					110	9790	111	9110	111	8660								

WEIGHT = 11600 LBS								VENR = 135 KIAS								WEIGHT = 11400 LBS								VENR = 133 KIAS							
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2								
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST			10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	V1 DIST	V1 DIST	V1 DIST									
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT									
-35	99	7490	98	6160	99	5840	99	5530	100	5220	115	121	-35	97	7190	97	5960	97	5640	98	5340	98	5040								
-30	99	7680	99	6390	99	6060	100	5730	100	5420	115	121	-30	98	7430	97	6170	98	5850	98	5540	99	5230								
-25	101	8090	100	6730	101	6390	101	6050	102	5720	116	121	-25	99	7820	99	6500	99	6170	100	5840	100	5520								
-20	102	8520	101	7100	102	6740	102	6390	103	6050	116	121	-20	100	8240	100	6860	100	6510	101	6170	101	5830								
-15	101	9240	103	7480	103	7100	103	6740	104	6380	117	121	-15	102	8670	101	7220	102	6860	102	6500	102	6160								
-10	101	10080	104	7890	104	7500	105	7120	105	6750	117	121	-10	101	9380	102	7620	103	7240	103	6870	104	6510								
-5			105	8370	106	7960	106	7560	106	7170	117	121	-5	101	10390	104	8070	104	7680	105	7290	105	6910								
0			107	8860	107	8430	107	8010	108	7610	118	121	0			105	8550	105	8130	106	7720	106	7330								
5			108	9400	108	8920	109	8480	109	8050	118	121	5			106	9040	107	8600	107	8180	107	7760								
8					109	9230	109	8780	110	8340	118	121	8			108	9560	108	9110	108	8660	109	8230								
10					109	9450	110	8990	110	8540	119	121	10			108	9730	108	9220	108	8770	109	8330								
11					110	9560	110	9100	110	8650	119	121	11					109	9670	110	9200	110	8740								
													16						110	9320	110	8850	118	120							

Figure 7-2 (Sheet 27)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
13,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS							WEIGHT = 10500 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	94 6730	94 5560					94 5270	95 4970	95 4690	
-30	94 6950	94 5750	95 5450	95 5150	96 4860	112 118	-30	90 6370	90 5260	91 4970	91 4700	92 4430	108 115
-25	96 7310	95 6060	96 5740	97 5430	97 5130	112 118	-25	92 6700	92 5540	92 5240	93 4950	93 4670	109 115
-20	97 7690	97 6390	97 6060	98 5730	98 5420	112 118	-20	93 7050	93 5830	93 5520	94 5220	94 4920	109 115
-15	99 8090	98 6730	98 6380	99 6050	99 5720	113 118	-15	94 7410	94 6140	94 5810	95 5500	95 5190	110 115
-10	100 8520	99 7100	100 6730	100 6380	101 6040	113 118	-10	96 7790	95 6470	96 6130	96 5800	97 5480	110 115
-5	101 9010	101 7510	101 7130	101 6770	102 6410	114 118	-5	97 8240	97 6840	97 6490	97 6150	98 5810	111 115
0	102 9720	102 7950	102 7550	103 7170	103 6790	114 118	0	99 8700	98 7230	98 6870	99 6510	99 6160	111 115
5	101 10660	103 8400	104 7980	104 7580	104 7190	115 118	5	100 9170	99 7640	100 7250	100 6880	100 6510	111 115
10		104 8890	105 8450	105 8030	105 7620	115 118	10	101 9690	100 8070	101 7670	101 7280	102 6900	112 115
15		106 9420	106 8960	106 8520	107 8090	115 118	15	102 10480	102 8550	102 8130	102 7720	103 7320	112 115
16		106 9530	106 9070	107 8630	107 8190	115 118	20		103 9080	103 8640	104 8210	104 7790	113 115
20			107 9530	108 9060	108 8610	116 118	22		104 9900	104 8850	104 8410	105 7980	113 115
22				108 9300	108 8830	116 118	25			105 9330	105 8870	106 8420	113 115
							26			106 9520	106 9050	106 8590	113 115

WEIGHT = 10000 LBS							WEIGHT = 9500 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	86 5770	86 4730					87 4440	87 4180	88 3940	
-30	87 5880	87 4840	87 4570	88 4310	88 4060	106 113	-30	86 5780	86 4740	86 4420	86 4110	86 3810	104 112
-25	88 6140	88 5060	88 4780	89 4510	89 4250	106 113	-25	84 5740	84 4710	85 4400	85 4150	86 3900	103 111
-20	89 6430	89 5310	89 5020	90 4740	90 4460	106 113	-20	85 5900	85 4850	85 4580	86 4320	87 4060	103 110
-15	90 6760	90 5580	90 5280	91 4990	91 4700	106 113	-15	86 6150	86 5060	86 4780	87 4510	87 4250	103 110
-10	91 7110	91 5880	92 5560	92 5260	93 4960	107 113	-10	87 6460	87 5320	87 5030	88 4750	88 4470	104 110
-5	93 7500	92 6210	93 5890	93 5570	94 5260	107 113	-5	89 6810	88 5620	89 5310	89 5020	90 4730	104 110
0	94 7910	94 6560	94 6220	95 5890	95 5560	108 113	0	90 7180	90 5930	90 5610	90 5300	91 5000	105 110
5	96 8340	95 6920	95 6570	96 6220	96 5880	108 113	5	91 7550	91 6250	91 5920	92 5600	92 5280	105 110
10	97 8800	96 7310	97 6940	97 6580	97 6220	109 113	10	93 7960	92 6600	93 6250	93 5920	93 5590	105 110
15	99 9300	98 7740	98 7350	98 6970	99 6600	109 113	15	94 8410	93 6980	94 6620	94 6260	95 5920	106 110
20	100 9860	99 8210	99 7800	100 7400	100 7010	110 113	20	96 8910	95 7390	95 7010	95 6640	96 6280	106 110
25	102 10540	101 8860	101 8420	101 7990	102 7580	110 113	25	98 9590	97 7960	97 7560	97 7170	97 6780	107 110
26	103 10850	101 9020	102 8580	102 8140	102 7720	110 113	27	99 9960	97 8270	98 7850	98 7450	98 7050	107 110
27	103 11160	102 9200	102 8750	102 8310	103 7870	110 113							

WEIGHT = 9000 LBS							WEIGHT = 8500 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	87 5730	87 4710					87 4390	87 4080	87 3790	
-30	86 5760	86 4730	86 4420	86 4110	86 3810	102 111	-30	86 5750	86 4740	86 4420	86 4110	86 3820	100 110
-25	85 5720	85 4690	85 4370	85 4060	85 3770	101 110	-25	85 5700	85 4690	85 4370	85 4070	85 3770	100 108
-20	83 5670	83 4650	83 4330	83 4020	83 3750	101 109	-20	83 5660	83 4640	83 4320	83 4020	83 3720	99 107
-15	82 5650	82 4630	83 4370	83 4110	84 3870	100 108	-15	82 5610	82 4590	82 4280	82 3970	82 3680	98 106
-10	83 5870	83 4820	83 4550	84 4290	84 4030	100 107	-10	80 5560	80 4550	80 4230	80 3930	81 3690	98 105
-5	84 6150	84 5050	84 4770	85 4500	85 4240	101 107	-5	80 5590	80 4570	80 4310	81 4060	81 3810	97 104
0	85 6480	85 5340	86 5040	86 4750	87 4470	101 107	0	81 5830	81 4780	81 4510	82 4250	82 3990	98 104
5	87 6810	86 5610	87 5310	87 5010	88 4720	101 107	5	82 6110	82 5010	82 4730	83 4460	83 4200	98 104
10	88 7180	88 5920	88 5600	89 5290	89 4990	102 107	10	83 6430	83 5280	84 4990	84 4700	85 4430	98 104
15	90 7570	89 6260	89 5920	90 5600	90 5280	102 107	15	85 6780	84 5580	85 5270	85 4970	86 4680	99 104
20	91 8010	90 6620	91 6270	91 5930	91 5600	103 107	20	86 7160	86 5900	86 5580	87 5270	87 4960	99 104
25	93 8610	92 7120	92 6750	93 6390	93 6040	103 107	25	88 7690	88 6340	88 6000	88 5670	89 5340	100 104
27	94 8930	93 7390	93 7010	94 6640	94 6270	104 107	27	89 7970	88 6570	89 6220	89 5880	90 5540	100 104

Figure 7-2 (Sheet 28)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**14,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - OFF**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS							
		ZERO WIND		HEADWINDS						ZERO WIND		HEADWINDS			
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	VR V2 KIAS		
-35	100 10040	106 7680	106 7300	106 6930	107 6570	120 125	-35	100 9500	104 7470	105 7100	105 6730	106 6380	119 124		
-30	99 10750	106 8020	107 7630	107 7250	108 6870	120 125	-30	99 10180	105 7800	106 7410	106 7040	106 6670	119 124		
-25		108 8470	108 8060	108 7660	109 7270	121 125	-25		106 8230	107 7830	107 7430	108 7050	120 124		
-20		107 9260	109 8510	110 8090	110 7690	121 125	-20		108 8690	108 8270	108 7860	109 7460	120 124		
-15		106 10160	109 9190	111 8550	111 8120	122 125	-15		107 9510	109 8730	109 8300	110 7880	121 124		
-10				112 9140	112 8610	122 125	-10			109 9490	111 8790	111 8360	121 124		
-7				111 9770	113 8930	122 125	-5				111 9480	112 8880	121 124		
-5					114 9160	122 125	-3					113 9100	122 124		

WEIGHT = 12000 LBS								WEIGHT = 11800 LBS							
		ZERO WIND		HEADWINDS						ZERO WIND		HEADWINDS			
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	VR V2 KIAS		
-35	101 8910	103 7230	103 6860	104 6510	104 6160	118 123	-35	102 8390	101 6990	102 6640	102 6290	103 5950	117 122		
-30	100 9540	104 7550	104 7170	105 6800	105 6450	118 123	-30	101 8930	102 7300	103 6930	103 6570	103 6230	117 122		
-25	99 10390	105 7960	105 7570	106 7190	106 6810	119 123	-25	100 9720	103 7700	104 7310	104 6940	105 6580	117 122		
-20		106 8400	106 7990	107 7590	107 7200	119 123	-20	99 10590	105 8120	105 7720	105 7330	106 6950	118 122		
-15		107 8860	108 8430	108 8020	108 7610	119 123	-15		106 8560	106 8150	107 7740	107 7340	118 122		
-10		107 9730	109 8930	109 8490	110 8070	120 123	-10		107 9050	107 8620	108 8200	108 7780	119 122		
-5			109 9730	111 9010	111 8570	120 123	-5		107 9950	109 9150	109 8700	109 8270	119 122		
0				111 9240	111 8780	120 123	0			109 9920	110 9230	111 8770	119 122		
-3				111 9580	112 9100	121 123	2				111 9440	111 8980	120 122		

WEIGHT = 11600 LBS								WEIGHT = 11400 LBS							
		ZERO WIND		HEADWINDS						ZERO WIND		HEADWINDS			
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	VR V2 KIAS		
-35	100 8120	100 6760	100 6410	101 6070	101 5750	116 121	-35	99 7860	98 6530	99 6190	99 5860	100 5540	114 120		
-30	101 8460	101 7050	101 6700	102 6350	102 6010	116 121	-30	100 8190	99 6820	100 6470	100 6130	100 5800	115 120		
-25	101 9070	102 7440	102 7070	103 6700	103 6350	116 121	-25	101 8620	100 7180	101 6820	101 6470	102 6120	115 120		
-20	100 9880	103 7840	103 7460	104 7080	104 6710	117 121	-20	101 9200	102 7580	102 7200	102 6830	103 6470	115 120		
-15	100 10760	104 8270	105 7870	105 7470	105 7080	117 121	-15	100 10020	103 7990	103 7590	103 7210	104 6830	116 120		
-10		106 8740	106 8320	106 7910	107 7500	117 121	-10	100 10980	104 8440	104 8030	105 7630	105 7230	116 120		
-5		107 9270	107 8830	108 8390	108 7970	118 121	-5		105 8940	106 8510	106 8090	106 7680	117 120		
0		107 10150	108 9350	109 8890	109 8450	118 121	0		107 9470	107 9020	107 8580	108 8150	117 120		
2			109 9570	109 9100	110 8650	118 121	5			108 9550	108 9090	109 8630	117 120		
5				110 9430	110 8970	119 121	10				110 9680	110 9160	118 120		
							11				110 9740	110 9270	118 120		

Figure 7-2 (Sheet 29)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
14.000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS								WEIGHT = 10500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	95 7340	95 6090	96 5770	96 5460	97 5150	112 118		-35	91 6730	91 5560	92 5270	92 4980	93 4690	109 115					
-30	96 7650	96 6350	96 6020	97 5700	97 5390	112 118		-30	92 7010	92 5810	92 5490	93 5190	93 4900	109 115					
-25	98 8050	97 6690	98 6350	98 6010	99 5690	113 118		-25	93 7370	93 6110	94 5790	94 5470	95 5170	109 115					
-20	99 8470	98 7050	99 6700	99 6350	100 6010	113 118		-20	95 7750	94 6430	95 6100	95 5770	96 5450	110 115					
-15	100 8910	100 7430	100 7060	100 6690	101 6340	113 118		-15	96 8150	96 6780	96 6430	96 6090	97 5760	110 115					
-10	101 9430	101 7850	101 7460	102 7080	102 6710	114 118		-10	97 8590	97 7150	97 6790	98 6430	98 6090	111 115					
-5	101 10370	102 8310	103 7910	103 7510	103 7120	114 118		-5	99 9080	98 7570	99 7190	99 6810	99 6450	111 115					
0		103 8800	104 8370	104 7950	104 7540	115 118		0	100 9590	99 8000	100 7600	100 7210	101 6830	112 115					
5		105 9310	105 8860	105 8430	106 8000	115 118		5	101 10180	101 8460	101 8040	101 7630	102 7240	112 115					
10		106 9840	106 9380	107 8920	107 8470	115 118		10	101 11190	102 8940	102 8510	103 8080	103 7670	112 115					
11		106 9960	106 9480	107 9020	107 8570	115 118		15		103 9460	103 9000	104 8550	104 8120	113 115					
15				108 9480	108 8980	116 118		18		104 9780	104 9310	104 8860	105 8410	113 115					
18					109 9310	116 118		20		104 10010	105 9540	105 9070	105 8610	113 115					
								23			106 9580	106 9120	106 8610	113 115					

WEIGHT = 10000 LBS								WEIGHT = 9500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	87 6190	87 5090	88 4810	88 4540	89 4280	106 113		-35	85 5890	85 4840	85 4510	85 4200	86 3950	104 111					
-30	88 6410	88 5290	88 5000	89 4720	90 4450	106 113		-30	84 5900	84 4850	85 4580	85 4320	86 4070	103 111					
-25	89 6730	89 5560	90 5260	90 4970	91 4680	106 113		-25	85 6150	85 5060	86 4780	86 4510	87 4250	103 110					
-20	90 7070	90 5850	91 5540	91 5230	92 4940	107 113		-20	86 6430	86 5290	87 5010	87 4720	88 4450	103 110					
-15	92 7430	91 6150	92 5830	92 5510	93 5200	107 113		-15	87 6750	87 5570	88 5270	88 4970	89 4690	104 110					
-10	93 7830	93 6490	93 6150	94 5820	94 5500	107 113		-10	89 7100	88 5870	89 5550	89 5250	90 4950	104 110					
-5	95 8260	94 6860	94 6510	95 6160	95 5830	108 113		-5	90 7490	90 6200	90 5870	91 5550	91 5240	105 110					
0	96 8720	95 7250	96 6880	96 6520	97 6170	108 113		0	92 7900	91 6540	91 6200	92 5870	92 5540	105 110					
5	97 9200	97 7660	97 7270	97 6890	98 6530	109 113		5	93 8330	92 6910	93 6550	93 6200	94 5860	105 110					
10	99 9710	98 8090	98 7690	98 7290	99 6910	109 113		10	94 8780	94 7290	94 6920	94 6550	95 6200	106 110					
15	100 10250	99 8550	99 8120	100 7710	100 7310	110 113		15	96 9260	95 7700	95 7310	95 6920	96 6550	106 110					
20	101 10840	100 9050	100 8600	101 8170	101 7750	110 113		20	97 9780	96 8140	96 7730	97 7330	97 6940	107 110					
23		102 9530	102 9070	102 8610	102 8170	110 113		25	99 10750	98 8900	98 8460	99 8030	99 7610	107 110					
25		102 9910	103 9450	103 8990	103 8540	111 113													

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	85 5870	85 4830	85 4500	85 4180	85 3880	102 110		-35	85 5860	85 4820	85 4500	85 4190	85 3880	100 109					
-30	84 5870	84 4820	84 4500	84 4180	84 3870	101 109		-30	84 5860	84 4820	84 4490	84 4180	84 3880	99 108					
-25	83 5840	83 4790	83 4460	83 4150	83 3900	101 108		-25	83 5820	83 4780	83 4450	83 4140	83 3830	99 107					
-20	82 5870	82 4820	83 4550	83 4290	84 4040	100 108		-20	81 5770	81 4730	81 4410	81 4090	81 3790	98 106					
-15	83 6130	83 5040	84 4760	84 4490	85 4220	100 107		-15	80 5730	80 4690	80 4360	80 4100	81 3850	98 105					
-10	84 6420	84 5280	85 4990	85 4710	86 4430	101 107		-10	80 5820	80 4770	80 4500	81 4240	82 3980	97 104					
-5	86 6760	85 5570	86 5270	86 4970	87 4690	101 107		-5	81 6080	81 4990	81 4710	82 4440	82 4180	98 104					
0	87 7120	87 5880	87 5560	88 5250	88 4950	102 107		0	82 6390	82 5250	83 4960	83 4680	84 4400	98 104					
5	88 7500	88 6200	88 5870	89 5550	89 5230	102 107		5	84 6720	83 5530	84 5220	84 4930	85 4640	98 104					
10	90 7900	89 6540	90 6190	90 5860	90 5530	102 107		10	85 7070	85 5820	85 5510	85 5200	86 4900	99 104					
15	91 8320	90 6890	91 6530	91 6180	91 5840	103 107		15	86 7440	86 6140	86 5810	87 5490	87 5170	99 104					
20	92 8780	92 7280	92 6910	92 6540	93 6180	103 107		20	88 7840	87 6480	87 6130	88 5800	88 5470	100 104					
25	95 9590	94 7950	94 7540	94 7150	95 6760	104 107		25	90 8540	89 7060	90 6690	90 6330	90 5970	100 104					

Figure 7-2 (Sheet 30)



### TAKEOFF FIELD LENGTH - FEET, FLAPS UP (WET RUNWAY OVER A 15 FOOT SCREEN HEIGHT) (ANTI-ICE ON)

Determine takeoff field length,  $V_1$ ,  $V_R$ ,  $V_2$  and  $V_{ENR}$  from Figure 7-4. If the runway has a gradient, adjust  $V_1$  and takeoff field length using figure 7-3.

If the required distance is greater than the available distance, the airplane weight must be reduced until distance required is less than or equal to distance available.

#### TAKEOFF FIELD LENGTH WITH RUNWAY GRADIENT FLAPS UP, ANTI-ICE ON

ZERO RUNWAY GRADIENT	UPHILL GRADIENT				DOWNHILL GRADIENT			
	SHADED AND NON-SHADED				SHADED		NON-SHADED	
	2%	1.5%	1%	0.5%	-1%	-2%	-1%	-2%
	$V_1 + 7^*$ Knots	$V_1 + 5^*$ Knots	$V_1 + 3^*$ Knots	$V_1 + 2^*$ Knot	$V_1 - 4$ Knots	$V_1 - 8$ Knots	$V_1 + 1^*$ Knot	$V_1 + 1^*$ Knot
2400	2750	2650	2550	2550	2400	2300	2600	2650
2600	3000	2900	2800	2750	2600	2550	2800	2900
2800	3300	3150	3050	2950	2800	2750	3000	3150
3000	3500	3350	3250	3200	3000	2950	3250	3350
3200	3750	3600	3450	3400	3200	3150	3450	3550
3400	4000	3850	3650	3600	3400	3350	3650	3800
3600	4250	4050	3900	3800	3600	3550	3850	4000
3800	4450	4250	4100	4000	3800	3750	4050	4200
4000	4700	4450	4300	4250	4000	3950	4250	4450
4200	4950	4700	4550	4450	4200	4150	4500	4650
4400	5200	4950	4750	4650	4400	4350	4700	4850
4600	5450	5200	4950	4850	4600	4500	4900	5050
4800	5700	5400	5150	5050	4800	4700	5100	5300
5000	5950	5650	5400	5300	4950	4900	5300	5500
5200	6150	5900	5600	5500	5150	5100	5550	5700
5400	6400	6100	5800	5700	5350	5250	5750	5900
5600	6650	6350	6050	5900	5550	5450	5950	6100
5800	6850	6550	6250	6100	5750	5600	6100	6300
6000	7050	6800	6450	6300	5950	5750	6300	6500
6200	7300	7000	6700	6550	6150	5950	6550	6700
6400	7550	7250	6950	6750	6300	6100	6700	6850
6600	7850	7450	7150	6950	6500	6300	6900	7050
6800	8100	7700	7400	7150	6700	6500	7100	7300
7000	8400	7950	7650	7400	6900	6700	7300	7500
7200	8750	8200	7900	7600	7050	6850	7500	7650
7400	9100	8450	8100	7800	7250	7000	7700	7850
7600	9450	8750	8350	8000	7450	7150	7950	8100
7800	9750	9000	8550	8200	7650	7350	8150	8300
8000	10050	9250	8750	8400	7800	7500	8350	8450
8200	10400	9550	9050	8600	8000	7700	8500	8650
8400	10800	9900	9300	8800	8200	7850	8700	8850
8600	11200	10200	9600	9000	8350	8050	8900	9050
8800	11750	10600	9850	9200	8550	8200	9100	9250
9000	12250	10900	10150	9450	8700	8350	9300	9450
9500	13500	11700	10800	10000	9150	8750	9800	9900
10000	14550	12600	11550	10600	9550	9150	10300	10350
10500	15500	13350	12200	11150	10000	9500	10800	10900
11000		14150	12900	11700	10450	9850	11250	11350
11500		15000	13550	12300	10850	10200	11700	11750
12000		15850	14200	12850	11250	10600	12100	12150

\* If the adjusted  $V_1$  is greater than  $V_R$ , the value of  $V_R$  must be used for  $V_1$ .

Figure 7-3



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
SEA LEVEL

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS																	
VENR = 138 KIAS								VENR = 137 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2		TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2											
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS												
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT											
-25	100	4840	100	3890	101	3640	101	3410	102	3180	118	125	-25	99	4720	99	3780	99	3540	100	3310	101	3090	117	124
-20	100	4920	100	3960	101	3710	101	3480	102	3240	118	125	-20	99	4790	99	3850	99	3610	100	3380	101	3150	117	124
-15	100	5000	100	4030	101	3780	101	3540	102	3310	118	125	-15	99	4870	99	3920	99	3680	100	3440	101	3220	117	124
-10	100	5080	100	4090	101	3850	101	3610	102	3370	118	125	-10	99	4940	99	3980	99	3740	100	3500	101	3280	117	124
-5	100	5150	100	4160	101	3910	101	3670	102	3430	118	125	-5	99	5020	99	4050	99	3810	100	3570	101	3340	117	124
0	101	5280	100	4270	101	4010	101	3770	102	3530	118	125	0	99	5140	99	4160	100	3910	100	3670	101	3430	117	124
5	101	5400	101	4380	101	4120	102	3870	102	3620	118	125	5	100	5260	99	4260	100	4010	101	3760	101	3520	117	124
10	104	5900	104	4780	104	4510	105	4230	105	3970	119	125	10	103	5740	102	4650	103	4380	103	4110	104	3860	118	124

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS																	
VENR = 136 KIAS								VENR = 133 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2		TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2											
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS												
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT											
-25	97	4580	97	3660	98	3430	98	3200	99	2990	116	123	-25	93	4250	93	3390	94	3170	95	2960	96	2750	113	121
-20	97	4650	97	3730	98	3490	98	3270	99	3050	116	123	-20	93	4320	93	3450	94	3230	95	3020	96	2810	113	121
-15	97	4720	97	3790	98	3560	98	3330	99	3110	116	123	-15	93	4390	93	3510	94	3290	95	3070	96	2860	113	121
-10	97	4790	97	3860	98	3620	98	3390	99	3170	116	123	-10	93	4450	93	3570	94	3350	95	3130	96	2920	113	121
-5	97	4870	97	3920	98	3680	98	3450	99	3230	116	123	-5	93	4520	93	3630	94	3410	95	3190	95	2970	113	121
0	98	4980	97	4020	98	3780	99	3550	99	3320	116	123	0	94	4620	94	3720	94	3490	95	3270	96	3050	113	120
5	98	5100	98	4130	98	3880	99	3640	100	3410	116	123	5	94	4720	94	3810	95	3570	95	3350	96	3130	113	120
10	101	5560	101	4500	101	4240	102	3980	102	3730	117	123	10	97	5140	97	4150	97	3900	98	3650	99	3420	114	120

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS																	
VENR = 131 KIAS								VENR = 125 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2		TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2											
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS												
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT											
-25	92	4220	92	3370	92	3110	92	2860	92	2620	111	119	-25	92	4220	92	3380	92	3120	92	2870	92	2630	107	117
-20	92	4290	92	3430	92	3170	92	2910	92	2670	111	119	-20	92	4280	92	3440	92	3180	92	2930	92	2690	107	117
-15	92	4350	92	3490	92	3220	92	2970	92	2720	111	119	-15	92	4350	92	3500	92	3240	92	2980	92	2740	107	117
-10	92	4420	92	3550	92	3280	92	3020	92	2770	111	119	-10	92	4410	92	3560	92	3290	92	3040	92	2790	107	117
-5	92	4490	92	3610	92	3340	92	3080	92	2830	111	119	-5	92	4480	92	3620	92	3350	92	3090	92	2840	108	117
0	91	4550	91	3670	91	3400	92	3130	92	2880	111	119	0	92	4550	92	3680	92	3410	92	3150	92	2900	107	116
5	91	4620	91	3730	91	3460	92	3190	93	2930	111	118	5	91	4610	91	3740	91	3460	91	3200	91	2950	107	116
10	93	4740	93	3810	94	3570	94	3340	95	3120	111	118	10	88	4680	88	3800	88	3520	88	3260	88	3000	106	114

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS																	
VENR = 118 KIAS								VENR = 115 KIAS																	
TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2		TEMP DEG C	TAILWIND 10 KTS	ZERO WIND V1 DIST	HEADWINDS			VR V2											
			10 KTS	20 KTS	30 KTS						10 KTS	20 KTS	30 KTS												
	V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS		V1 DIST	V1 DIST	V1 DIST	V1 DIST	V1 DIST	KIAS												
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT											
-25	93	4250	93	3420	93	3160	93	2910	93	2680	104	115	-25	93	4280	93	3450	93	3200	93	2950	93	2710	102	114
-20	93	4310	93	3480	93	3220	93	2970	93	2730	104	115	-20	93	4350	93	3510	93	3250	93	3000	93	2760	102	114
-15	93	4380	93	3540	93	3270	93	3020	93	2780	104	115	-15	93	4410	93	3570	93	3310	93	3060	93	2810	102	114
-10	92	4440	92	3600	92	3330	92	3080	92	2830	104	115	-10	93	4480	93	3630	93	3370	93	3110	93	2870	102	114
-5	92	4510	92	3650	92	3390	92	3130	92	2880	104	115	-5	93	4540	93	3690	93	3420	93	3170	93	2920	102	114
0	92	4580	92	3710	92	3450	92	3190	92	2940	104	114	0	92	4610	92	3750	92	3480	92	3220	92	2970	102	113
5	92	4640	92	3770	92	3500	92	3240	92	2990	104	114	5	92	4670	92	3810	92	3540	92	3280	92	3030	102	113
10	88	4710	88	3830	88	3560	88	3300	88	3040	102	112	10	89	4740	89	3870	89	3590	89	3330	89	3080	100	111

Figure 7-4 (Sheet 1 of 15)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**1000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - ON**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT											
-25	101	5030	100	4050	101	3800	102	3560	102	3320	118	125	-25	99	4900	99	3940	100	3700	100	3460	101	3230	117	124
-20	101	5110	100	4120	101	3870	102	3630	102	3390	118	125	-20	99	4980	99	4010	100	3770	100	3530	101	3300	117	124
-15	101	5190	100	4200	101	3940	101	3690	102	3460	118	125	-15	99	5060	99	4080	100	3830	100	3590	101	3360	117	124
-10	101	5270	100	4270	101	4010	101	3760	102	3520	118	125	-10	99	5130	99	4150	100	3900	100	3660	101	3430	117	124
-5	101	5370	100	4350	101	4090	102	3840	102	3600	118	125	-5	99	5230	99	4240	100	3990	100	3740	101	3500	117	124
0	101	5500	101	4470	101	4210	102	3950	103	3700	118	125	0	100	5360	99	4350	100	4090	101	3840	101	3600	117	124
5	103	5780	102	4700	103	4430	103	4160	104	3910	119	125	5	101	5630	101	4570	101	4310	102	4050	103	3790	118	124
10	106	6320	105	5140	106	4850	106	4560	107	4280	120	125	10	104	6150	104	5000	104	4710	105	4430	105	4160	119	124

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT											
-25	98	4750	97	3810	98	3580	99	3350	99	3130	116	123	-25	94	4400	94	3520	94	3300	95	3080	96	2870	113	120
-20	98	4830	97	3880	98	3640	99	3410	99	3190	116	123	-20	94	4480	94	3590	94	3360	95	3140	96	2930	113	120
-15	98	4900	97	3950	98	3710	99	3480	99	3250	116	123	-15	94	4550	94	3650	94	3420	95	3200	96	2990	113	120
-10	98	4980	97	4020	98	3780	99	3540	99	3310	116	123	-10	94	4620	94	3710	94	3480	95	3260	96	3050	113	120
-5	98	5070	98	4100	98	3860	99	3620	100	3390	116	123	-5	94	4700	94	3790	94	3560	95	3330	96	3110	113	120
0	98	5200	98	4210	99	3960	99	3720	100	3490	116	123	0	94	4810	94	3880	95	3650	95	3420	96	3200	113	120
5	100	5460	99	4430	100	4170	100	3910	101	3670	117	123	5	96	5050	95	4080	96	3840	97	3600	97	3370	114	120
10	103	5960	102	4840	103	4560	103	4290	104	4020	118	123	10	99	5500	98	4450	99	4190	99	3930	100	3680	115	120

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT											
-25	92	4310	92	3450	92	3190	92	2930	92	2690	111	119	-25	92	4310	92	3460	92	3200	92	2950	92	2700	107	116
-20	91	4380	91	3510	91	3250	92	2990	92	2740	111	119	-20	92	4370	92	3520	92	3250	92	3000	92	2750	107	116
-15	91	4450	91	3580	91	3300	92	3040	92	2790	111	119	-15	92	4440	92	3580	92	3310	92	3060	92	2810	107	116
-10	91	4520	91	3640	91	3360	92	3100	92	2850	111	119	-10	92	4510	92	3640	92	3370	92	3110	92	2860	107	116
-5	91	4590	91	3700	91	3420	92	3160	92	2900	111	118	-5	91	4580	91	3700	91	3430	91	3170	91	2920	107	116
0	91	4650	91	3760	91	3480	92	3220	93	2960	111	118	0	91	4640	91	3760	91	3490	91	3230	91	2970	107	116
5	92	4720	92	3820	92	3540	93	3300	94	3090	111	118	5	90	4710	90	3830	90	3550	90	3280	90	3030	107	115
10	95	5070	94	4090	95	3840	96	3600	96	3360	112	118	10	86	4780	86	3880	87	3610	88	3340	89	3080	106	113

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS											
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT											
-25	92	4330	92	3500	92	3230	92	2980	92	2740	104	114	-25	92	4360	92	3530	92	3270	92	3020	92	2780	102	113
-20	92	4400	92	3550	92	3290	92	3040	92	2790	104	114	-20	92	4430	92	3590	92	3320	92	3070	92	2830	102	113
-15	92	4470	92	3610	92	3350	92	3090	92	2850	104	114	-15	92	4500	92	3650	92	3380	92	3130	92	2880	102	113
-10	92	4530	92	3680	92	3410	92	3150	92	2900	104	114	-10	92	4570	92	3710	92	3440	92	3180	92	2940	102	113
-5	92	4600	92	3740	92	3470	92	3210	92	2960	104	114	-5	92	4630	92	3770	92	3500	92	3240	92	2990	102	113
0	91	4670	91	3800	91	3530	91	3260	91	3010	104	114	0	91	4700	91	3830	91	3560	91	3300	91	3050	102	113
5	90	4740	90	3860	90	3590	90	3320	90	3070	103	113	5	90	4770	90	3890	90	3620	90	3360	90	3100	101	112
10	87	4800	87	3920	87	3640	87	3370	87	3120	102	110	10	87	4830	87	3950	87	3670	87	3410	87	3150	100	109

Figure 7-4 (Sheet 2)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
2000 FEET

CONDITIONS: WET RUNWAY      ANTI-ICE - ON  
 RUNWAY GRADIENT - ZERO      SPEED BRAKES - RETRACT  
 LANDING GEAR - DOWN      INOPERATIVE ENGINE - WINDMILLING AFTER V1  
 THRUST ATTENUATORS - AUTO      OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS      VENR = 139 KIAS								WEIGHT = 12200 LBS      VENR = 137 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-25	101 5200	101 4210	101 3950	102 3700	102 3460	118 125	-25	99 5070	99 4090	100 3840	100 3600	101 3360	117 124		
-20	101 5290	100 4280	101 4020	102 3770	102 3530	118 125	-20	99 5150	99 4170	100 3920	100 3670	101 3430	117 124		
-15	101 5370	100 4350	101 4100	102 3840	102 3600	118 125	-15	99 5240	99 4240	100 3990	100 3740	101 3500	117 124		
-10	101 5450	100 4430	101 4170	102 3920	102 3670	118 125	-10	99 5320	99 4310	100 4060	100 3810	101 3570	117 124		
-5	101 5590	101 4540	101 4280	102 4020	103 3770	118 125	-5	100 5450	99 4430	100 4160	101 3910	101 3670	117 124		
0	102 5730	101 4670	102 4400	102 4140	103 3890	119 125	0	100 5580	100 4540	100 4280	101 4030	102 3780	118 124		
5	104 6200	104 5050	104 4770	105 4490	105 4210	119 125	5	103 6030	102 4910	103 4630	103 4360	104 4090	118 124		
10	107 6790	107 5540	107 5230	107 4920	108 4630	120 125	10	106 6600	105 5380	106 5080	106 4780	107 4490	119 124		

WEIGHT = 12000 LBS      VENR = 136 KIAS								WEIGHT = 11500 LBS      VENR = 134 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-25	98 4920	98 3960	98 3720	99 3490	100 3260	116 123	-25	94 4550	94 3660	94 3430	95 3210	96 2990	113 120		
-20	98 5000	98 4030	98 3790	99 3550	100 3320	116 123	-20	94 4630	94 3720	94 3490	95 3270	96 3050	113 120		
-15	98 5080	98 4100	98 3860	99 3620	100 3390	116 123	-15	94 4700	94 3790	94 3560	95 3330	96 3110	113 120		
-10	98 5150	98 4180	98 3930	99 3690	100 3450	116 123	-10	94 4770	94 3850	94 3620	95 3390	96 3170	113 120		
-5	98 5280	98 4280	99 4030	99 3790	100 3550	116 123	-5	94 4880	94 3950	95 3710	95 3480	96 3250	113 120		
0	99 5420	98 4410	99 4150	100 3890	100 3650	116 123	0	95 5010	94 4060	95 3810	96 3580	96 3350	113 120		
5	101 5850	101 4760	101 4480	102 4220	103 3960	117 123	5	97 5400	97 4380	98 4120	98 3870	99 3630	114 120		
10	105 6400	104 5210	104 4910	105 4620	105 4340	118 123	10	100 5900	100 4790	100 4510	101 4240	101 3980	115 120		

WEIGHT = 11000 LBS      VENR = 130 KIAS								WEIGHT = 10000 LBS      VENR = 126 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-25	91 4420	91 3550	91 3280	92 3020	93 2770	111 118	-25	91 4410	91 3550	91 3290	91 3030	91 2780	107 116		
-20	91 4490	91 3610	91 3340	92 3080	93 2830	111 118	-20	91 4480	91 3610	91 3340	91 3090	91 2840	107 116		
-15	91 4560	91 3670	91 3400	92 3140	92 2880	111 118	-15	91 4550	91 3680	91 3410	91 3140	91 2890	107 116		
-10	91 4630	91 3740	91 3460	92 3190	92 2940	111 118	-10	91 4620	91 3740	91 3470	91 3200	91 2950	107 116		
-5	91 4700	91 3800	91 3520	92 3250	93 3010	111 118	-5	91 4690	91 3800	91 3530	91 3260	91 3010	107 116		
0	91 4770	91 3870	92 3580	92 3310	93 3090	111 118	0	90 4760	90 3870	90 3590	90 3320	90 3060	107 116		
5	93 4980	93 4020	94 3780	94 3540	95 3320	111 118	5	88 4830	88 3930	88 3650	88 3380	88 3120	106 114		
10	96 5430	96 4390	96 4130	97 3880	98 3630	112 118	10	88 4900	88 3990	88 3710	89 3440	90 3180	106 113		

WEIGHT = 9000 LBS      VENR = 118 KIAS								WEIGHT = 8500 LBS      VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-25	92 4430	92 3580	92 3320	92 3070	92 2820	104 114	-25	92 4460	92 3620	92 3350	92 3100	92 2850	102 113		
-20	92 4500	92 3650	92 3380	92 3120	92 2880	104 114	-20	92 4530	92 3680	92 3410	92 3150	92 2910	102 113		
-15	92 4570	92 3710	92 3440	92 3180	92 2930	104 114	-15	92 4600	92 3740	92 3470	92 3210	92 2960	102 113		
-10	92 4640	92 3770	92 3500	92 3240	92 2990	104 114	-10	92 4670	92 3800	92 3530	92 3270	92 3020	102 113		
-5	91 4710	91 3830	91 3560	91 3300	91 3040	104 114	-5	91 4740	91 3870	91 3590	91 3330	91 3080	102 113		
0	91 4780	91 3900	91 3620	91 3360	91 3100	103 114	0	91 4810	91 3930	91 3650	91 3390	91 3130	101 112		
5	88 4850	88 3960	88 3680	88 3420	88 3160	102 112	5	88 4880	88 3990	88 3720	88 3450	88 3190	100 110		
10	85 4920	85 4020	85 3740	85 3470	85 3210	101 109	10	85 4950	85 4060	85 3780	85 3510	85 3250	99 108		

Figure -4 (Sheet 37)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**3000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - ON**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			-30	101 5260	100 4260					101 4000	102 3750	102 3510		118 125	-30
-25	101 5350	100 4340	101 4080	102 3830	102 3590	118 125	-25	99 5210	99 4220	100 3970	100 3730	101 3480	117 124		
-20	101 5440	100 4410	101 4150	102 3900	102 3660	118 125	-20	99 5300	99 4300	100 4040	100 3800	101 3550	117 124		
-15	101 5520	100 4490	101 4230	102 3980	102 3730	118 125	-15	99 5380	99 4370	100 4120	100 3870	101 3620	117 124		
-10	101 5620	100 4580	101 4320	102 4060	102 3810	118 125	-10	99 5480	99 4460	100 4200	100 3950	101 3700	117 124		
-5	101 5800	101 4730	102 4460	102 4200	103 3940	119 125	-5	100 5650	100 4600	100 4340	101 4080	101 3830	118 124		
0	103 6050	102 4940	103 4660	103 4390	104 4130	119 125	0	101 5890	101 4810	101 4530	102 4270	102 4010	118 124		
5	106 6660	105 5440	106 5140	106 4840	107 4560	120 125	5	105 6480	104 5290	104 5000	105 4710	105 4420	119 124		
10	109 7300	108 5970	108 5640	109 5320	109 5010	121 125	10	108 7100	107 5800	107 5480	108 5170	108 4860	120 124		

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			-30	98 4970	97 4010					98 3770	99 3530	100 3300		116 123	-30
-25	98 5060	98 4090	98 3840	99 3600	100 3370	116 123	-25	94 4690	94 3770	94 3540	95 3320	96 3100	113 120		
-20	98 5140	97 4160	98 3910	99 3670	99 3440	116 123	-20	94 4760	94 3840	94 3610	95 3380	96 3160	113 120		
-15	98 5220	97 4240	98 3990	99 3740	99 3510	116 123	-15	94 4840	94 3910	94 3680	95 3450	96 3230	113 120		
-10	98 5320	98 4320	98 4070	99 3820	100 3590	116 123	-10	94 4920	94 3990	94 3750	95 3520	96 3290	113 120		
-5	98 5480	98 4460	99 4200	99 3950	100 3700	116 123	-5	94 5060	94 4110	95 3870	96 3630	96 3400	113 120		
0	100 5710	99 4660	100 4390	100 4130	101 3880	117 123	0	96 5280	95 4290	96 4040	97 3800	97 3560	114 120		
5	103 6280	102 5120	103 4830	103 4550	104 4280	118 123	5	99 5790	99 4710	99 4440	100 4180	100 3920	115 120		
10	106 6870	105 5610	106 5300	106 4990	107 4700	119 123	10	102 6330	101 5160	102 4860	102 4580	103 4300	116 120		

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			-30	91 4480	91 3600					91 3330	92 3070	92 2820		111 118	-30
-25	91 4550	91 3670	91 3390	92 3130	92 2870	111 118	-25	91 4540	91 3670	91 3400	91 3140	91 2890	107 116		
-20	91 4620	91 3730	91 3450	92 3190	92 2930	111 119	-20	91 4610	91 3730	91 3460	91 3200	91 2940	107 116		
-15	91 4690	91 3800	91 3520	92 3250	92 2990	111 119	-15	91 4680	91 3800	91 3520	91 3260	91 3000	107 116		
-10	91 4770	91 3860	91 3580	92 3310	92 3050	111 118	-10	91 4750	91 3860	91 3580	91 3320	91 3060	107 116		
-5	91 4840	91 3930	91 3640	92 3370	93 3140	111 118	-5	91 4820	91 3930	91 3650	91 3380	91 3120	107 116		
0	92 4910	92 3990	92 3710	93 3480	94 3260	111 118	0	89 4890	89 3980	89 3700	89 3430	89 3170	107 115		
5	95 5330	95 4330	95 4070	96 3820	96 3580	112 118	5	87 4920	87 4010	87 3730	88 3450	89 3190	106 113		
10	98 5820	97 4720	98 4450	98 4180	99 3920	113 118	10	89 4920	89 4010	89 3730	90 3450	91 3230	106 113		

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			-30	92 4500	92 3640					92 3370	92 3120	92 2870		104 114	-30
-25	92 4560	92 3700	92 3430	92 3170	92 2920	104 114	-25	92 4590	92 3730	92 3460	92 3210	92 2960	102 113		
-20	92 4630	92 3760	92 3490	92 3230	92 2980	104 114	-20	92 4660	92 3800	92 3530	92 3260	92 3010	102 113		
-15	92 4700	92 3830	92 3550	92 3290	92 3040	104 114	-15	92 4730	92 3860	92 3590	92 3320	92 3070	102 113		
-10	91 4770	91 3890	91 3620	91 3350	91 3100	104 114	-10	92 4800	92 3920	92 3650	92 3380	92 3130	102 113		
-5	91 4850	91 3960	91 3680	91 3410	91 3150	104 114	-5	91 4880	91 3990	91 3710	91 3440	91 3190	102 113		
0	90 4910	90 4010	90 3740	90 3470	90 3210	103 113	0	90 4940	90 4050	90 3770	90 3500	90 3240	101 112		
5	86 4930	86 4040	86 3750	86 3480	86 3220	102 110	5	86 4960	86 4060	86 3780	86 3510	86 3250	100 109		
10	83 4930	83 4030	83 3750	83 3480	83 3220	101 108	10	84 4950	84 4060	84 3780	84 3510	84 3240	99 107		

Figure 7-4 (Sheet 4)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
4000 FEET

CONDITIONS: WET RUNWAY      ANTI-ICE - ON  
RUNWAY GRADIENT - ZERO      SPEED BRAKES - RETRACT  
LANDING GEAR - DOWN      INOPERATIVE ENGINE - WINDMILLING AFTER V1  
THRUST ATTENUATORS - AUTO      OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS      VENR = 139 KIAS								WEIGHT = 12200 LBS      VENR = 138 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-30	101 5410	100 4390	101 4130	101 3880	102 3640	118 125	-30	99 5270	99 4270	100 4020	100 3780	101 3530	117 124		
-25	101 5500	100 4480	101 4210	101 3960	102 3710	118 125	-25	99 5360	99 4360	100 4100	100 3850	101 3610	117 124		
-20	101 5590	100 4560	101 4290	101 4040	102 3790	118 125	-20	99 5450	99 4440	100 4180	100 3930	101 3680	117 124		
-15	101 5680	100 4640	101 4370	101 4110	102 3860	118 125	-15	99 5540	99 4520	100 4260	100 4000	101 3750	117 124		
-10	101 5840	101 4770	101 4500	102 4240	102 3980	118 125	-10	100 5680	99 4650	100 4370	101 4120	101 3870	117 124		
-5	102 6040	101 4940	102 4670	103 4400	103 4130	119 125	-5	100 5880	100 4810	101 4540	101 4270	102 4010	118 124		
0	104 6490	104 5320	104 5030	105 4740	105 4460	119 125	0	103 6320	102 5170	103 4890	103 4600	104 4330	118 124		
5	108 7150	107 5870	107 5540	108 5230	108 4930	120 125	5	106 6960	105 5700	106 5390	106 5080	107 4780	119 124		
10	111 7850	109 6440	110 6090	110 5750	111 5420	121 125	10	109 7630	108 6250	109 5910	109 5580	109 5260	120 124		

WEIGHT = 12000 LBS      VENR = 137 KIAS								WEIGHT = 11500 LBS      VENR = 134 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-30	98 5110	97 4140	98 3890	99 3650	99 3420	116 123	-30	94 4740	94 3820	94 3590	95 3370	96 3150	113 120		
-25	98 5200	97 4220	98 3970	99 3730	99 3490	116 123	-25	94 4820	94 3900	94 3660	95 3430	96 3210	113 120		
-20	98 5290	97 4300	98 4040	99 3800	99 3560	116 123	-20	94 4900	94 3970	94 3730	95 3500	96 3280	113 120		
-15	98 5370	97 4370	98 4120	99 3870	99 3630	116 123	-15	94 4980	94 4040	94 3800	95 3570	96 3340	113 120		
-10	98 5520	98 4500	98 4240	99 3990	100 3740	116 123	-10	94 5100	94 4150	95 3900	95 3670	96 3440	113 120		
-5	99 5700	99 4660	99 4390	100 4130	100 3880	116 123	-5	95 5270	95 4290	95 4040	96 3800	97 3560	113 120		
0	101 6130	101 5010	101 4730	102 4450	102 4190	117 123	0	97 5660	97 4610	98 4350	98 4090	99 3840	114 120		
5	105 6740	104 5520	104 5210	105 4910	105 4620	118 123	5	101 6220	100 5070	101 4780	101 4500	102 4230	115 120		
10	108 7390	107 6050	107 5720	107 5390	108 5080	119 123	10	104 6800	103 5550	103 5240	104 4940	104 4640	116 120		

WEIGHT = 11000 LBS      VENR = 130 KIAS								WEIGHT = 10000 LBS      VENR = 124 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-30	91 4610	91 3720	91 3450	92 3180	92 2920	111 119	-30	91 4600	91 3720	91 3450	91 3190	91 2940	107 116		
-25	91 4680	91 3790	91 3510	92 3240	92 2980	111 119	-25	91 4670	91 3790	91 3510	91 3250	91 2990	107 116		
-20	91 4760	91 3850	91 3570	92 3300	92 3040	111 119	-20	91 4740	91 3850	91 3580	91 3310	91 3050	107 116		
-15	91 4830	91 3920	91 3640	92 3360	92 3100	111 119	-15	91 4820	91 3920	91 3640	91 3370	91 3110	107 117		
-10	91 4910	91 3990	91 3700	92 3430	93 3180	111 118	-10	91 4890	91 3990	91 3700	91 3430	91 3170	107 116		
-5	91 4980	91 4060	92 3770	92 3500	93 3280	111 118	-5	90 4970	90 4050	90 3770	90 3500	90 3230	107 116		
0	93 5210	93 4230	94 3990	94 3740	95 3510	111 118	0	88 5020	88 4110	88 3820	88 3540	88 3280	106 114		
5	97 5720	96 4650	97 4380	97 4120	98 3860	112 118	5	88 5010	88 4090	88 3800	89 3530	90 3260	106 113		
10	100 6250	99 5080	99 4790	100 4510	100 4230	113 118	10	91 5220	91 4220	91 3960	92 3720	92 3480	107 113		

WEIGHT = 9000 LBS      VENR = 119 KIAS								WEIGHT = 8500 LBS      VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
-30	92 4620	92 3760	92 3480	92 3220	92 2970	104 114	-30	92 4650	92 3790	92 3520	92 3260	92 3010	102 113		
-25	92 4690	92 3820	92 3550	92 3280	92 3030	104 114	-25	92 4720	92 3850	92 3580	92 3320	92 3060	102 113		
-20	92 4770	92 3880	92 3610	92 3340	92 3090	104 114	-20	92 4800	92 3920	92 3640	92 3380	92 3120	102 113		
-15	92 4840	92 3950	92 3670	92 3400	92 3150	104 114	-15	92 4870	92 3980	92 3700	92 3440	92 3180	102 113		
-10	91 4910	91 4020	91 3740	91 3470	91 3210	104 114	-10	91 4940	91 4050	91 3770	91 3500	91 3240	102 113		
-5	90 4990	90 4080	90 3800	90 3530	90 3270	103 113	-5	90 5020	90 4110	90 3830	90 3560	90 3300	101 112		
0	88 5040	88 4130	88 3850	88 3580	88 3310	102 112	0	88 5070	88 4160	88 3880	88 3610	88 3340	100 110		
5	85 5020	85 4110	85 3830	85 3550	85 3290	101 109	5	85 5040	85 4140	85 3850	85 3580	85 3320	99 108		
10	82 4950	82 4050	83 3770	83 3490	84 3230	100 107	10	82 4970	82 4070	82 3790	82 3520	82 3250	98 106		

Figure 7-4 (Sheet 5)



TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
5000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

HEIGHT = 12375 LBS								VENR = 139 KIAS								HEIGHT = 12200 LBS								VENR = 138 KIAS														
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2															
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	10 KTS	V1 DIST			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2																				
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT										
-35	100	5470	100	4440	101	4180	101	3930	102	3680	118	125	-35	99	5320	99	4320	99	4070	100	3820	101	3580	117	124	-35	99	5420	99	4410	99	4150	100	3900	101	3660	117	124
-30	100	5570	100	4530	101	4270	101	4010	102	3760	118	125	-30	99	5420	99	4410	99	4150	100	3900	101	3660	117	124	-30	99	5510	99	4490	99	4240	100	3980	101	3730	117	124
-25	100	5660	100	4620	101	4350	101	4090	102	3840	118	125	-25	99	5510	99	4490	99	4240	100	3980	101	3730	117	124	-25	99	5610	99	4580	99	4320	100	4060	101	3810	117	124
-20	100	5750	100	4700	101	4430	101	4170	102	3920	118	125	-20	99	5610	99	4580	99	4320	100	4060	101	3810	117	124	-20	99	5700	99	4660	99	4400	100	4140	101	3880	117	124
-15	100	5850	100	4790	101	4520	101	4250	102	4000	118	125	-15	99	5700	99	4660	99	4400	100	4140	101	3880	117	124	-15	100	5910	100	4840	100	4570	101	4310	101	4050	117	124
-10	101	6070	101	4980	102	4700	102	4430	103	4170	119	125	-10	100	5910	100	4840	100	4570	101	4310	101	4050	117	124	-10	101	6150	101	5040	101	4760	102	4490	102	4220	118	124
-5	102	6310	102	5180	102	4900	103	4620	104	4350	119	125	-5	101	6150	101	5040	101	4760	102	4490	102	4220	118	124	0	106	6990	105	5740	104	5280	105	4980	105	4620	119	124
0	106	6990	105	5740	106	5430	106	5130	107	4830	120	125	0	106	6990	104	5580	104	5280	105	4980	105	4620	119	124	5	109	7700	108	6330	109	5990	109	5660	109	5340	121	125
5	109	7700	108	6330	109	5990	109	5660	109	5340	121	125	5	108	7490	107	6150	107	5820	108	5500	108	5180	120	124	10	109	8910	111	6960	111	6590	112	6230	112	5880	122	125
10	109	8910	111	6960	111	6590	112	6230	112	5880	122	125	10	110	8930	110	6760	110	6400	110	6050	111	5700	121	124													

HEIGHT = 12000 LBS								VENR = 137 KIAS								HEIGHT = 11500 LBS								VENR = 134 KIAS														
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2															
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	10 KTS	V1 DIST			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2																				
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT										
-35	97	5160	97	4190	98	3940	99	3700	99	3460	116	123	-35	94	4790	94	3870	94	3640	95	3410	96	3190	113	121	-35	94	4880	94	3950	94	3710	95	3480	96	3260	113	121
-30	97	5260	97	4270	98	4020	99	3780	99	3540	116	123	-30	94	4880	94	3950	94	3710	95	3480	96	3260	113	121	-30	94	4960	94	4020	94	3790	95	3550	96	3330	113	121
-25	97	5350	97	4350	98	4100	99	3850	99	3610	116	123	-25	94	4960	94	4020	94	3790	95	3550	96	3330	113	121	-25	94	5040	94	4100	94	3860	95	3620	96	3400	113	121
-20	97	5440	97	4430	98	4180	99	3930	99	3690	116	123	-20	94	5040	94	4100	94	3860	95	3620	96	3400	113	121	-20	94	5120	94	4170	94	3930	95	3690	96	3460	113	121
-15	97	5520	97	4510	98	4250	99	4000	99	3760	116	123	-15	94	5120	94	4170	94	3930	95	3690	96	3460	113	121	-15	94	5200	94	4240	94	4000	95	3760	96	3530	113	120
-10	98	5740	98	4700	99	4430	99	4170	100	3920	116	123	-10	94	5300	94	4320	95	4070	96	3830	96	3590	113	120	-10	95	5510	95	4500	96	4240	97	3990	97	3750	114	120
-5	99	5960	99	4880	100	4610	100	4340	101	4080	117	123	-5	95	5510	95	4500	96	4240	97	3990	97	3750	114	120	0	103	6590	102	5400	103	5100	103	4810	104	4530	118	123
0	103	6590	102	5400	103	5100	103	4810	104	4530	118	123	0	99	6080	99	4970	99	4690	100	4420	100	4150	115	120	5	106	7250	105	5950	106	5630	106	5310	107	5000	119	123
5	106	7250	105	5950	106	5630	106	5310	107	5000	119	123	5	102	6680	102	5470	102	5160	103	4870	103	4580	116	120	10	109	7980	108	6530	108	6180	109	5840	109	5510	120	123
10	109	7980	108	6530	108	6180	109	5840	109	5510	120	123	10	105	7320	104	5990	105	5660	105	5340	106	5030	117	120													

HEIGHT = 11000 LBS								VENR = 131 KIAS								HEIGHT = 10000 LBS								VENR = 124 KIAS														
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2															
	10 KTS	V1 DIST	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2	10 KTS	V1 DIST			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	VR V2																				
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT										
-35	91	4680	91	3780	91	3500	92	3230	92	2980	111	119	-35	92	4660	92	3780	92	3510	92	3240	92	2990	107	117	-35	91	4750	91	3850	91	3570	91	3300	91	3050	107	117
-30	91	4750	91	3850	91	3570	92	3290	92	3030	111	119	-30	91	4740	91	3850	91	3570	91	3300	91	3050	107	117	-30	91	4830	91	3910	91	3630	92	3360	92	3090	111	119
-25	91	4830	91	3910	91	3630	92	3360	92	3090	111	119	-25	91	4810	91	3910	91	3630	91	3360	91	3110	107	117	-25	91	4900	91	3980	91	3700	92	3420	92	3160	111	119
-20	91	4900	91	3980	91	3700	92	3420	92	3160	111	119	-20	91	4890	91	3980	91	3700	91	3430	91	3170	107	117	-20	91	4980	91	4050	91	3760	92	3490	92	3220	111	119
-15	91	4980	91	4050	91	3760	92	3490	92	3220	111	119	-15	91	4960	91	4050	91	3770	91	3490	91	3230	107	117	-15	91	5020	91	4090	91	3800	92	3540	93	3320	111	118
-10	91	5020	91	4090	91	3800	92	3540	93	3320	111	118	-10	90	5000	90	4090	90	3800	90	3530	90	3260	107	116	-10	92	5090	92	4150	92	3900	93	3670	93	3440	111	118
-5	92	5090	92	4150	92	3900	93	3670	93	3440	111	118	-5	89	5040	89	4120	89	3840	89	3560	89	3290	107	115	0	95	5590	95	4560	95	4290	96	4040	96	3790	112	118
0	95	5590	95	4560	95	4290	96	4040	96	3790	112	118	0	87	5050	87	4130	87	3840	88	3560	89	3300	106	113	5	98	6140	98	5010	98	4720	99	4450	99	4180	113	118
5	98	6140	98	5010	98	4720																																



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
6000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS		30 KTS							
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT						
-35	100	5630	100	4590	101	4320	101	4060	102	3810	118	125	-35	99	5480	99	4460	99	4210	100	3950	101	3710	117	124
-30	100	5730	100	4680	101	4410	101	4150	102	3900	118	125	-30	99	5580	99	4550	99	4290	100	4040	101	3790	117	124
-25	100	5820	100	4770	101	4500	101	4240	102	3980	118	125	-25	99	5680	99	4640	99	4380	100	4120	101	3870	117	124
-20	100	5920	100	4860	101	4580	101	4320	102	4060	118	125	-20	99	5770	99	4730	99	4460	100	4200	100	3950	117	124
-15	101	6080	100	4990	101	4720	102	4450	102	4190	118	125	-15	99	5920	99	4860	100	4590	100	4320	101	4070	117	124
-10	102	6340	101	5220	102	4930	103	4650	103	4380	119	125	-10	101	6170	100	5070	101	4790	101	4520	102	4260	118	124
-5	104	6770	103	5570	104	5270	104	4980	105	4690	119	125	-5	103	6590	102	5420	103	5120	103	4840	104	4560	118	124
0	108	7500	107	6180	107	5850	108	5530	108	5220	120	125	0	106	7300	105	6010	106	5690	106	5370	107	5070	119	124
5	108	8680	110	6840	110	6480	110	6130	111	5790	121	125	5	109	8130	108	6640	109	6290	109	5950	110	5610	120	124
10	107	10270	112	7530	113	7140	113	6760	113	6380	122	125	10	108	9590	111	7310	111	6930	112	6550	112	6190	121	124

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS		30 KTS							
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT						
-35	97	5310	97	4320	98	4070	98	3830	99	3590	116	123	-35	93	4930	93	4000	94	3760	95	3530	96	3310	113	121
-30	97	5410	97	4410	98	4150	98	3910	99	3670	116	123	-30	94	5020	94	4080	94	3840	95	3610	96	3380	113	121
-25	97	5500	97	4490	98	4240	98	3990	99	3740	116	123	-25	94	5110	94	4160	94	3920	95	3680	96	3450	113	121
-20	97	5600	97	4580	98	4320	98	4070	99	3820	116	123	-20	94	5190	94	4240	94	3990	95	3750	96	3520	113	121
-15	98	5740	98	4710	98	4440	99	4190	99	3940	116	123	-15	94	5320	94	4340	94	4100	95	3850	96	3620	113	120
-10	99	5990	99	4910	99	4640	100	4370	100	4120	116	123	-10	95	5530	95	4530	95	4270	96	4020	97	3780	113	120
-5	101	6380	101	5250	101	4960	102	4680	102	4400	117	123	-5	97	5890	97	4830	97	4560	98	4290	98	4040	114	120
0	105	7070	104	5820	104	5500	105	5190	105	4890	118	123	0	101	6520	100	5350	101	5050	101	4760	102	4480	115	120
5	108	7810	107	6420	107	6080	108	5740	108	5420	119	123	5	104	7190	103	5900	103	5570	104	5260	104	4950	116	120
10	109	8850	109	7060	110	6690	110	6330	111	5970	120	123	10	107	7880	106	6470	106	6120	106	5780	107	5450	117	120

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS		30 KTS							
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT						
-35	91	4820	91	3910	91	3620	92	3350	92	3090	111	119	-35	92	4810	92	3910	92	3630	92	3360	92	3100	108	117
-30	91	4890	91	3980	91	3690	92	3410	92	3150	111	119	-30	91	4880	91	3970	91	3690	91	3420	91	3160	108	117
-25	91	4970	91	4050	91	3760	92	3480	92	3210	111	119	-25	91	4960	91	4040	91	3760	91	3490	91	3220	108	117
-20	91	5050	91	4120	91	3830	92	3550	92	3280	111	119	-20	91	5030	91	4110	91	3830	91	3550	91	3280	108	117
-15	91	5120	91	4180	91	3880	92	3600	92	3350	111	118	-15	91	5100	91	4170	91	3880	91	3600	91	3330	107	116
-10	91	5150	91	4210	92	3940	93	3710	93	3480	111	118	-10	90	5130	90	4200	90	3910	90	3630	90	3360	107	116
-5	93	5430	93	4430	93	4180	94	3930	95	3690	111	118	-5	88	5130	88	4200	88	3910	88	3630	88	3360	106	114
0	97	5990	96	4900	97	4620	97	4350	98	4090	112	118	0	88	5080	88	4140	88	3850	89	3600	90	3370	106	113
5	100	6600	99	5400	100	5090	100	4800	100	4520	113	118	5	91	5510	91	4470	91	4210	92	3960	93	3710	107	113
10	103	7230	102	5910	102	5590	103	5270	103	4960	114	118	10	94	6020	94	4890	94	4610	95	4330	95	4070	108	113

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS																	
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS			VR V2 KIAS								
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS			20 KTS	30 KTS	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS		30 KTS							
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS			FT	KIAS	FT	KIAS	FT	KIAS	FT		KIAS	FT						
-35	92	4830	92	3940	92	3660	92	3390	92	3140	104	115	-35	92	4860	92	3970	92	3690	92	3430	92	3170	102	114
-30	92	4900	92	4000	92	3730	92	3460	92	3200	104	115	-30	92	4930	92	4040	92	3760	92	3490	92	3230	102	114
-25	92	4980	92	4070	92	3790	92	3520	92	3260	104	115	-25	92	5010	92	4110	92	3820	92	3550	92	3290	102	114
-20	92	5050	92	4140	92	3860	92	3590	92	3320	104	115	-20	92	5080	92	4170	92	3890	92	3620	92	3350	102	114
-15	91	5110	91	4200	91	3910	91	3640	91	3370	104	114	-15	91	5140	91	4230	91	3940	91	3670	91	3400	102	113
-10	90	5140	90	4220	90	3940	90	3660	90	3390	103	113	-10	90	5170	90	4250	90	3970	90	3690	90	3420	101	112
-5	88	5140	88	4220	88	3930	88	3650	88	3380	102	112	-5	88	5160	88	4240	88	3950	88	3680	88	3410	101	111
0	84	5070	84	4150	84	3860	84	3590	84	3320	101	109	0	85	5080	85	4170	85	3880	85	3610	85	3340	99	108
5	82	5010	82	4090	83	3810	84	3530	84	3260	100	107	5	81	5010	81	4100	81	3820	81	3550	81	3280	98	106
10	85	4950	85	4040	85	3750	86	3500	87	3270	101	107	10	80	4950	80	4040	81	3760	82	3490	82	3230	97	104



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**7000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - ON**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			KIAS FT	KIAS FT	KIAS FT					KIAS FT	KIAS FT	KIAS FT			
-35	100 5810	100 4760	101 4490	101 4230	102 3970	118 125	-35	99 5670	99 4630	99 4370	100 4110	101 3860	117 124		
-30	100 5930	100 4860	101 4590	101 4320	102 4060	118 125	-30	99 5780	99 4730	99 4460	100 4200	101 3950	117 124		
-25	101 6050	100 4970	101 4690	101 4430	102 4160	118 125	-25	99 5900	99 4840	100 4570	100 4300	101 4050	117 124		
-20	101 6180	100 5080	101 4800	102 4530	102 4270	118 125	-20	99 6020	99 4950	100 4670	100 4400	101 4140	117 124		
-15	102 6400	101 5270	102 4990	102 4710	103 4440	119 125	-15	100 6230	100 5130	100 4850	101 4570	102 4310	118 124		
-10	103 6660	102 5500	103 5200	103 4910	104 4630	119 125	-10	101 6490	101 5350	101 5060	102 4780	102 4500	118 124		
-5	106 7290	105 6020	105 5700	106 5390	106 5080	120 125	-5	104 7090	104 5850	104 5540	105 5230	105 4940	119 124		
0	107 8410	108 6690	109 6340	109 6000	109 5670	121 125	0	108 7890	107 6500	107 6160	108 5830	108 5500	120 124		
5	106 9970	111 7400	111 7020	112 6650	112 6280	122 125	5	107 9340	110 7190	110 6810	111 6450	111 6090	121 124		
7		112 7700	113 7300	113 6920	113 6540	122 125	8	107 10340	111 7620	112 7220	112 6840	112 6470	121 124		
8		113 7840	113 7440	113 7050	114 6670	122 125	9		112 7760	112 7360	113 6970	113 6590	121 124		

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			KIAS FT	KIAS FT	KIAS FT					KIAS FT	KIAS FT	KIAS FT			
-35	97 5490	97 4480	98 4230	98 3980	99 3740	116 123	-35	94 5100	94 4150	94 3900	95 3670	96 3440	113 121		
-30	98 5600	97 4580	98 4320	99 4070	99 3820	116 123	-30	94 5190	94 4230	94 3990	95 3750	96 3520	113 121		
-25	98 5720	97 4680	98 4420	99 4170	99 3920	116 123	-25	94 5300	94 4330	94 4080	95 3840	96 3600	113 120		
-20	98 5840	98 4790	98 4520	99 4270	99 4010	116 123	-20	94 5400	94 4420	95 4170	95 3930	96 3690	113 120		
-15	99 6040	98 4970	99 4690	100 4430	100 4170	116 123	-15	95 5580	95 4580	95 4320	96 4070	96 3820	113 120		
-10	100 6290	99 5180	100 4890	100 4620	101 4350	117 123	-10	96 5810	96 4770	96 4500	97 4250	97 4000	114 120		
-5	103 6870	102 5660	103 5360	103 5060	104 4770	118 123	-5	99 6340	98 5210	99 4920	99 4640	100 4370	115 120		
0	106 7630	105 6290	106 5960	106 5630	107 5310	119 123	0	102 7030	102 5780	102 5460	103 5160	103 4860	116 120		
5	108 8660	108 6950	109 6580	109 6230	109 5880	120 123	5	106 7740	104 6370	105 6030	105 5700	106 5370	117 120		
9	107 9900	110 7500	111 7110	111 6730	111 6360	120 123	10	108 8510	107 7000	107 6630	108 6270	108 5920	117 120		
10	107 10240	111 7650	111 7250	112 6860	112 6490	120 123									

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			KIAS FT	KIAS FT	KIAS FT					KIAS FT	KIAS FT	KIAS FT			
-35	91 4970	91 4040	91 3760	92 3480	92 3210	111 119	-35	91 4950	91 4040	91 3760	91 3480	91 3220	108 117		
-30	91 5040	91 4110	91 3820	92 3540	92 3270	111 119	-30	91 5020	91 4110	91 3820	91 3540	91 3280	107 117		
-25	91 5110	91 4170	91 3880	92 3590	92 3340	111 119	-25	91 5090	91 4160	91 3870	91 3600	91 3330	107 116		
-20	91 5170	91 4230	91 3930	92 3650	92 3410	111 118	-20	91 5150	91 4220	91 3930	91 3650	91 3380	107 116		
-15	91 5200	91 4250	92 3990	92 3760	93 3530	111 118	-15	90 5170	90 4240	90 3950	90 3660	90 3390	107 116		
-10	92 5370	92 4390	92 4140	93 3900	94 3660	111 118	-10	89 5180	89 4240	89 3950	89 3670	89 3390	107 115		
-5	95 5830	94 4770	95 4510	96 4240	96 3990	112 118	-5	87 5140	87 4200	87 3910	88 3620	89 3350	106 113		
0	98 6450	98 5290	98 5000	99 4710	99 4430	113 118	0	90 5400	90 4400	90 4140	91 3890	91 3650	106 113		
5	101 7100	101 5820	101 5500	101 5190	102 4890	114 118	5	93 5920	92 4820	93 4540	93 4280	94 4010	107 113		
10	104 7790	103 6390	104 6040	104 5710	104 5380	114 118	10	96 6470	95 5280	95 4980	96 4690	96 4400	108 113		

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT			
			KIAS FT	KIAS FT	KIAS FT					KIAS FT	KIAS FT	KIAS FT			
-35	92 4970	92 4070	92 3790	92 3520	92 3260	104 115	-35	92 5000	92 4100	92 3820	92 3550	92 3290	102 113		
-30	91 5040	91 4130	91 3850	91 3580	91 3310	104 115	-30	92 5070	92 4170	92 3880	92 3610	92 3340	102 113		
-25	91 5110	91 4190	91 3900	91 3630	91 3360	104 114	-25	91 5130	91 4220	91 3940	91 3660	91 3390	102 113		
-20	91 5170	91 4250	91 3960	91 3680	91 3410	104 114	-20	91 5190	91 4270	91 3990	91 3710	91 3440	102 113		
-15	90 5180	90 4260	90 3970	90 3690	90 3420	103 114	-15	90 5200	90 4280	90 4000	90 3720	90 3450	102 112		
-10	89 5180	89 4260	89 3970	89 3690	89 3420	103 113	-10	89 5200	89 4280	89 3990	89 3710	89 3440	101 112		
-5	86 5130	86 4200	86 3920	86 3640	86 3370	102 110	-5	86 5140	86 4220	86 3930	86 3660	86 3390	100 109		
0	83 5070	83 4140	83 3860	83 3580	84 3310	100 108	0	83 5070	83 4160	83 3870	83 3590	83 3330	98 107		
5	84 5010	84 4090	84 3800	85 3530	85 3260	100 107	5	80 5010	80 4100	80 3810	81 3540	81 3270	97 104		
10	87 5300	86 4280	87 4030	87 3780	88 3540	101 107	10	82 4950	82 4040	82 3750	83 3480	83 3220	98 104		

Figure 7-4 (Sheet 8)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
8000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE HEIGHT FROM MAXIMUM TAKEOFF HEIGHT TABLES.

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS							
VENR = 140 KIAS								VENR = 139 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	101 6030	100 4950	101 4670	101 4400	102 4150	118 125		-35	99 5870	99 4820	100 4550	100 4280	101 4030	117 124	
-30	101 6150	100 5060	101 4780	102 4510	102 4250	118 125		-30	99 5990	99 4920	100 4650	100 4380	101 4120	117 124	
-25	101 6280	100 5170	101 4890	102 4610	102 4350	118 125		-25	99 6110	99 5030	100 4750	100 4480	101 4220	117 124	
-20	101 6430	101 5310	101 5020	102 4740	102 4470	118 125		-20	100 6260	99 5160	100 4880	101 4610	101 4340	117 124	
-15	102 6740	102 5570	103 5270	103 4980	104 4700	119 125		-15	101 6560	101 5420	101 5120	102 4840	102 4560	118 124	
-10	104 7120	103 5890	104 5580	104 5280	105 4980	119 125		-10	103 6930	102 5730	103 5420	103 5130	104 4840	118 124	
-5	106 8060	107 6510	107 6170	107 5840	108 5520	120 125		-5	106 7640	105 6320	106 5990	106 5670	107 5350	119 124	
0	105 9610	110 7240	110 6870	110 6510	111 6160	121 125		0	106 9040	108 7030	109 6670	109 6320	110 5970	120 124	
4		112 7870	112 7480	113 7090	113 6710	122 125		5		111 7790	112 7400	112 7010	112 6630	121 124	
5		113 8030	113 7620	113 7220	114 6840	122 125		6		112 7940	112 7540	112 7140	113 6760	121 124	

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS							
VENR = 138 KIAS								VENR = 135 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	98 5690	97 4660	98 4400	99 4150	99 3900	116 123		-35	94 5270	94 4310	94 4060	95 3820	96 3580	113 120	
-30	98 5810	98 4770	98 4500	99 4240	99 3990	116 123		-30	94 5380	94 4400	94 4150	95 3910	96 3670	113 120	
-25	98 5930	98 4870	98 4600	99 4340	99 4080	116 123		-25	94 5490	94 4490	95 4240	95 3990	96 3750	113 120	
-20	98 6080	98 5000	99 4730	99 4460	100 4200	116 123		-20	94 5610	94 4600	95 4350	95 4100	96 3850	113 120	
-15	100 6360	99 5240	100 4960	100 4680	101 4410	117 123		-15	96 5880	95 4830	96 4560	97 4300	97 4050	114 120	
-10	101 6720	101 5550	101 5250	102 4960	102 4680	117 123		-10	97 6200	97 5100	97 4820	98 4550	98 4290	114 120	
-5	104 7400	104 6120	104 5790	105 5480	105 5170	118 123		-5	100 6820	100 5620	100 5320	101 5020	101 4730	115 120	
0	107 8390	107 6800	107 6450	108 6100	108 5760	119 123		0	104 7570	103 6240	104 5910	104 5580	104 5270	116 120	
5	106 9990	110 7530	110 7140	110 6770	111 6400	120 123		5	107 8370	106 6900	106 6540	107 6180	107 5840	117 120	
6	106 10330	110 7880	111 7280	111 6900	111 6530	120 123		10	108 9630	109 7590	109 7200	109 6810	109 6440	118 120	
10		112 8300	113 7880	113 7470	113 7070	121 123									

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS							
VENR = 131 KIAS								VENR = 125 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	91 5120	91 4180	91 3890	92 3600	92 3330	111 119		-35	91 5100	91 4170	91 3890	91 3610	91 3340	107 117	
-30	91 5190	91 4240	91 3950	92 3660	92 3390	111 119		-30	91 5170	91 4240	91 3950	91 3670	91 3400	107 116	
-25	91 5260	91 4310	91 4010	92 3720	92 3470	111 118		-25	91 5240	91 4300	91 4010	91 3730	91 3450	107 116	
-20	91 5320	91 4360	91 4060	92 3790	93 3560	111 118		-20	90 5290	90 4350	90 4050	90 3770	90 3490	107 116	
-15	92 5430	92 4450	92 4200	93 3950	93 3720	111 118		-15	89 5250	89 4300	89 4010	89 3720	89 3450	107 115	
-10	93 5710	93 4680	94 4420	94 4170	95 3920	111 118		-10	87 5200	87 4260	87 3960	87 3680	88 3400	106 114	
-5	96 6270	96 5150	96 4870	97 4590	98 4320	112 118		-5	88 5260	88 4290	88 4040	89 3800	90 3560	106 113	
0	100 6950	99 5710	100 5400	100 5100	101 4800	113 118		0	91 5800	91 4730	91 4460	92 4200	93 3940	107 113	
5	103 7660	102 6300	102 5960	103 5630	103 5310	114 118		5	94 6370	94 5210	94 4910	95 4630	95 4350	108 113	
10	106 8420	105 6920	105 6550	105 6200	106 5850	115 118		10	97 6970	96 5700	97 5380	97 5080	98 4770	109 113	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 118 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	91 5120	91 4200	91 3920	91 3640	91 3370	104 114		-35	92 5150	92 4230	92 3950	92 3670	92 3410	102 113	
-30	91 5190	91 4270	91 3980	91 3700	91 3430	104 114		-30	91 5220	91 4300	91 4010	91 3730	91 3460	102 113	
-25	91 5260	91 4330	91 4040	91 3760	91 3490	104 114		-25	91 5280	91 4360	91 4070	91 3790	91 3520	102 113	
-20	91 5300	91 4370	91 4080	91 3790	91 3520	104 114		-20	91 5330	91 4400	91 4110	91 3820	91 3550	102 113	
-15	89 5250	89 4320	89 4030	89 3740	89 3470	103 113		-15	89 5270	89 4340	89 4050	89 3770	89 3500	101 112	
-10	88 5190	88 4260	88 3970	88 3690	88 3420	102 112		-10	88 5200	88 4280	88 3990	88 3710	88 3440	101 111	
-5	84 5130	84 4200	84 3910	84 3630	84 3360	101 109		-5	84 5130	84 4210	84 3920	84 3640	84 3370	99 108	
0	82 5070	83 4140	83 3850	84 3570	84 3300	100 107		0	81 5070	81 4150	81 3860	81 3580	81 3320	98 105	
5	85 5230	85 4240	86 3990	86 3740	87 3500	101 107		5	81 5010	81 4090	81 3800	82 3530	82 3260	97 104	
10	88 5700	88 4620	88 4350	89 4090	89 3830	102 107		10	83 5110	83 4130	84 3880	84 3630	85 3400	98 104	

Figure 7-4 (Sheet 9)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**9000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - ON**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
			-35	101 6310	101 5200	101 4920	102 4640	103 4370					119 125	-35	100 6150	100 5060	100 4780	101 4510	
-30	102 6490	101 5360	102 5070	102 4790	103 4510	119 125	-30	100 6320	100 5210	101 4930	101 4650	102 4380	118 124						
-25	102 6670	102 5510	102 5220	103 4930	103 4650	119 125	-25	101 6500	100 5360	101 5070	101 4790	102 4520	118 124						
-20	103 7010	103 5800	103 5490	104 5190	104 4900	119 125	-20	102 6820	102 5640	102 5340	103 5050	103 4760	118 124						
-15	106 7500	105 6210	105 5890	106 5570	106 5260	120 125	-15	104 7300	104 6040	104 5720	104 5410	105 5110	119 124						
-10	106 8570	107 6750	108 6400	108 6060	108 5730	121 125	-10	106 8070	106 6560	106 6220	107 5890	107 5560	120 124						
-5	104 10170	110 7490	111 7110	111 6730	111 6370	122 125	-5	105 9560	109 7270	109 6900	110 6540	110 6180	121 124						
-2		112 8000	112 7590	113 7200	113 6820	122 125	0		112 8080	112 7670	113 7270	113 6890	121 124						
0		113 8330	114 7910	114 7500	114 7100	122 125													

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
			-35	98 5970	98 4900	99 4630	99 4360	100 4110					116 123	-35	94 5510	94 4510	95 4260	95 4010	
-30	99 6130	98 5040	99 4770	100 4500	100 4240	116 123	-30	95 5660	95 4640	95 4390	96 4130	96 3890	113 120						
-25	99 6300	99 5190	99 4910	100 4640	101 4370	117 123	-25	95 5820	95 4780	96 4520	96 4260	97 4010	114 120						
-20	101 6610	100 5460	101 5160	101 4880	102 4600	117 123	-20	96 6100	96 5030	97 4750	97 4480	98 4220	114 120						
-15	103 7070	102 5840	103 5530	103 5230	103 4940	118 123	-15	99 6520	98 5370	99 5080	99 4800	100 4520	115 120						
-10	106 7670	104 6350	105 6010	105 5690	106 5380	118 123	-10	101 7070	101 5830	101 5520	102 5210	102 4920	115 120						
-5	106 8890	107 7030	108 6670	108 6310	109 5970	119 123	-5	105 7810	104 6450	104 6110	104 5770	105 5450	116 120						
0		110 7810	111 7410	111 7030	111 6650	120 123	0	108 8710	107 7150	107 6780	107 6420	108 6060	117 120						
3		112 8300	112 7880	113 7470	113 7080	121 123	3	107 9680	108 7600	108 7200	109 6820	109 6450	118 120						
							5	107 10390	109 7890	109 7490	110 7090	110 6710	118 120						
							7		110 8220	110 7800	111 7390	111 6990	118 120						

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
			-35	91 5230	91 4280	91 3980	92 3710	93 3480					111 118	-35	90 5210	90 4270	90 3980	90 3690	
-30	91 5280	91 4320	92 4050	92 3810	93 3580	111 118	-30	90 5250	90 4310	90 4010	90 3730	90 3460	107 116						
-25	91 5390	91 4410	92 4160	93 3920	93 3690	111 118	-25	89 5290	89 4350	89 4050	89 3760	89 3490	107 115						
-20	92 5620	92 4610	93 4350	94 4100	94 3860	111 118	-20	88 5290	88 4340	88 4050	88 3760	88 3480	106 114						
-15	94 6000	94 4930	95 4650	95 4390	96 4130	112 118	-15	86 5260	86 4310	87 4010	88 3720	88 3450	106 113						
-10	97 6490	97 5340	97 5050	98 4760	98 4490	112 118	-10	89 5430	88 4440	89 4180	90 3940	90 3700	106 113						
-5	100 7160	100 5900	100 5580	101 5270	101 4970	113 118	-5	92 5970	91 4880	92 4610	92 4340	93 4080	107 113						
0	104 7930	103 6530	103 6180	103 5840	104 5510	114 118	0	95 6590	94 5390	95 5090	95 4800	96 4510	108 113						
5	107 8740	105 7200	106 6820	106 6450	106 6090	115 118	5	98 7230	97 5920	97 5590	98 5280	98 4970	109 113						
7	108 9100	106 7490	107 7100	107 6710	107 6340	115 118	10	101 7920	99 6490	100 6130	100 5790	100 5460	110 113						
10	109 9800	108 7910	108 7500	108 7100	109 6710	116 118													

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT											
			-35	91 5220	91 4290	91 4000	91 3720	91 3450					104 114	-35	91 5240	91 4320	91 4030	91 3750	
-30	90 5260	90 4330	90 4040	90 3760	90 3480	103 114	-30	90 5280	90 4350	90 4060	90 3780	90 3510	102 112						
-25	90 5300	90 4360	90 4070	90 3790	90 3510	103 113	-25	90 5320	90 4390	90 4100	90 3810	90 3540	101 112						
-20	88 5290	88 4350	88 4060	88 3780	88 3500	103 112	-20	88 5300	88 4370	88 4080	88 3800	88 3530	101 111						
-15	86 5240	86 4310	86 4010	86 3730	86 3460	102 111	-15	86 5250	86 4320	86 4030	86 3750	86 3480	100 109						
-10	84 5190	84 4250	84 3960	84 3680	84 3410	101 109	-10	84 5190	84 4260	84 3970	84 3690	84 3420	99 107						
-5	83 5130	83 4200	83 3910	84 3620	85 3350	100 107	-5	81 5130	81 4200	81 3910	81 3630	81 3360	98 105						
0	86 5390	86 4380	86 4120	87 3870	87 3630	101 107	0	81 5070	81 4140	82 3850	82 3580	83 3310	98 104						
5	89 5900	88 4790	89 4520	89 4250	90 3980	102 107	5	84 5290	84 4280	84 4020	85 3770	85 3530	98 104						
10	91 6440	91 5230	91 4930	92 4640	92 4360	103 107	10	87 5760	86 4660	87 4390	87 4120	87 3860	99 104						

Figure 7-5 (Sheet 10)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
10,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS									WEIGHT = 12200 LBS										
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	102 6710	102 5540	102 5240	103 4960	103 4670	119 125		-35	101 6590	100 5390	101 5100	101 4820	102 4540	118 124					
-30	103 6930	102 5730	103 5430	103 5140	104 4850	119 125		-30	101 6750	101 5580	101 5280	102 4990	103 4710	118 124					
-25	103 7160	103 5940	103 5620	104 5320	104 5030	119 125		-25	102 6970	102 5770	102 5470	103 5170	103 4880	118 124					
-20	105 7870	105 6420	106 6090	106 5760	107 5450	120 125		-20	104 7530	104 6240	104 5910	105 5600	105 5290	119 124					
-15	104 9010	108 6980	108 6630	108 6280	109 5940	121 125		-15	105 8500	106 6790	107 6440	107 6100	107 5770	120 124					
-10		111 7800	111 7410	111 7030	112 6650	122 125		-10	104 10200	109 7580	110 7190	110 6820	111 6450	121 124					
-8		112 8160	112 7750	113 7350	113 6960	122 125		-7		111 8100	112 7690	112 7290	112 6900	121 124					
-7		113 8340	113 7920	113 7510	114 7120	122 125		-6		112 8280	112 7860	113 7460	113 7060	121 124					

WEIGHT = 12000 LBS									WEIGHT = 11500 LBS										
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	99 6330	99 5220	99 4930	100 4660	101 4390	117 123		-35	95 5850	95 4800	96 4540	96 4280	97 4030	114 120					
-30	100 6540	99 5400	100 5110	101 4830	101 4550	117 123		-30	96 6040	96 4970	96 4700	97 4440	97 4170	114 120					
-25	100 6760	100 5590	101 5290	101 5000	102 4720	117 123		-25	96 6240	96 5150	97 4860	97 4590	98 4320	114 120					
-20	103 7290	102 6040	103 5720	103 5410	104 5110	118 123		-20	99 6720	98 5550	99 5250	99 4960	100 4680	115 120					
-15	106 7920	105 6560	105 6220	106 5890	106 5570	119 123		-15	102 7300	101 6030	101 5710	102 5400	102 5100	116 120					
-10	105 9480	108 7920	108 6950	109 6580	109 6230	120 123		-10	105 8120	104 6710	104 6360	105 6020	105 5690	117 120					
-6		110 8000	111 7600	111 7200	111 6820	120 123		-5	107 9420	107 7490	108 7110	108 6730	108 6370	118 120					
-5		111 8180	111 7770	112 7370	112 6980	120 123		0	106 10100	108 7800	109 7400	109 7010	109 6630	118 120					
-3		112 8520	112 8100	113 7680	113 7270	121 123		0		110 8280	110 7860	110 7450	111 7050	118 120					
								1		110 8450	111 8020	111 7600	111 7200	118 120					

WEIGHT = 11000 LBS									WEIGHT = 10000 LBS										
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	91 5410	91 4430	92 4180	93 3940	93 3700	111 118		-35	90 5340	90 4380	90 4080	90 3790	90 3520	107 115					
-30	92 5570	92 4570	92 4320	93 4070	94 3820	111 118		-30	89 5360	89 4400	89 4100	89 3810	89 3530	107 115					
-25	92 5740	92 4720	93 4460	93 4200	94 3950	111 118		-25	88 5390	88 4420	88 4120	88 3830	88 3550	106 114					
-20	95 6180	95 5090	95 4810	96 4540	96 4270	112 118		-20	87 5350	87 4390	87 4090	88 3800	89 3560	106 113					
-15	97 6700	97 5520	97 5220	98 4930	98 4650	113 118		-15	89 5610	89 4590	89 4330	90 4070	90 3830	106 113					
-10	101 7450	100 6140	101 5810	101 5490	101 5180	114 118		-10	92 6200	92 5080	92 4800	93 4520	93 4250	107 113					
-5	104 8290	103 6840	104 6480	104 6130	104 5790	115 118		-5	96 6880	95 5640	95 5330	96 5030	96 4730	108 113					
0	107 9160	106 7550	106 7160	106 6770	107 6400	115 118		0	99 7560	98 6200	98 5860	98 5530	99 5210	109 113					
1	108 9340	106 7690	107 7290	107 6900	107 6520	115 118		5	101 8320	100 6820	100 6450	101 6100	101 5750	110 113					
5		108 8330	109 7900	109 7490	109 7080	116 118		8	103 8790	101 7210	102 6820	102 6450	102 6080	110 113					
8		110 8830	110 8380	110 7940	111 7520	116 118		10	104 9160	102 7480	103 7080	103 6690	103 6320	110 113					

WEIGHT = 9000 LBS									WEIGHT = 8500 LBS										
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	90 5340	90 4400	90 4100	90 3820	90 3540	103 113		-35	90 5360	90 4420	90 4130	90 3840	90 3570	101 112					
-30	89 5360	89 4410	89 4120	89 3830	89 3560	103 113		-30	89 5380	89 4440	89 4140	89 3860	89 3580	101 112					
-25	88 5380	88 4430	88 4130	88 3850	88 3570	103 112		-25	88 5390	88 4450	88 4150	88 3870	88 3590	101 111					
-20	86 5330	86 4390	86 4090	86 3800	86 3530	102 110		-20	86 5340	86 4400	86 4100	86 3820	86 3540	100 109					
-15	83 5280	83 4340	83 4040	83 3750	83 3480	101 109		-15	83 5280	83 4340	83 4050	83 3760	83 3490	99 107					
-10	83 5230	83 4290	84 3990	84 3710	85 3430	100 107		-10	80 5230	80 4290	80 4000	80 3710	81 3440	97 105					
-5	87 5630	86 4580	87 4310	87 4050	88 3800	101 107		-5	82 5170	82 4230	82 3940	83 3650	83 3380	98 104					
0	90 6170	89 5020	89 4730	90 4450	90 4180	102 107		0	85 5520	84 4470	85 4210	85 3950	86 3700	99 104					
5	92 6750	91 5500	92 5180	92 4880	93 4590	103 107		5	87 6030	87 4890	87 4610	88 4330	88 4060	99 104					
10	95 7370	94 6010	94 5670	94 5340	95 5020	104 107		10	90 6580	89 5340	89 5030	90 4730	90 4440	100 104					

Figure 7-5 (Sheet 11)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**11,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - ON**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS							
VENR = 141 KIAS								VENR = 140 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	104 7330	103 6070	104 5750	104 5440	105 5140	119 125		-35	102 7130	102 5900	102 5590	103 5290	103 4990	118 124	
-30	104 7570	104 6280	104 5960	105 5640	105 5330	119 125		-30	103 7370	102 6110	103 5790	103 5480	104 5180	118 124	
-25	104 8130	105 6580	105 6250	106 5920	106 5600	120 125		-25	104 7740	103 6400	104 6070	104 5750	105 5430	119 124	
-20	103 9100	107 7070	107 6710	107 6360	108 6020	120 125		-20	104 8590	105 6870	106 6520	106 6180	107 5850	119 124	
-15	102 10470	109 7710	109 7320	110 6950	110 6580	121 125		-15	103 9870	108 7490	108 7110	108 6740	109 6380	120 124	
-10		112 8740	113 8200	113 7790	113 7380	122 125		-10		111 8380	111 7960	112 7560	112 7160	121 124	
-9		111 9120	113 8390	113 7970	114 7560	122 125		-9		112 8570	112 8140	112 7730	112 7330	121 124	
								-8		112 8790	112 8340	113 7910	113 7500	122 124	

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS							
VENR = 139 KIAS								VENR = 136 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	101 6910	100 5710	101 5410	101 5110	102 4830	117 123		-35	97 6380	96 5260	97 4970	98 4690	98 4420	114 120	
-30	101 7140	101 5910	101 5600	102 5300	102 5000	117 123		-30	97 6590	97 5440	98 5150	98 4860	99 4580	114 120	
-25	102 7470	102 6190	102 5870	103 5560	103 5250	118 123		-25	98 6890	98 5690	99 5390	99 5100	100 4810	115 120	
-20	104 8030	104 6650	104 6310	105 5970	105 5650	118 123		-20	101 7380	100 6110	100 5790	101 5470	101 5170	115 120	
-15	104 9210	106 7240	107 6870	107 6510	107 6160	119 123		-15	103 8020	102 6650	103 6300	103 5960	104 5640	116 120	
-10		109 8100	110 7690	110 7300	110 6910	120 123		-10	105 9170	106 7420	106 7040	106 6670	107 6310	117 120	
-8		111 8470	111 8050	111 7640	112 7240	120 123		-5		109 8270	109 7860	109 7450	109 7050	118 120	
-5		112 9050	113 8600	113 8170	113 7740	121 123		-2		110 8820	111 8380	111 7950	111 7530	118 120	

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS							
VENR = 132 KIAS								VENR = 126 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	93 5870	92 4820	93 4560	94 4300	94 4040	111 118		-35	88 5470	88 4490	88 4180	88 3890	88 3600	106 114	
-30	93 6070	93 4990	94 4720	94 4450	95 4190	111 118		-30	87 5510	87 4520	87 4210	87 3910	88 3630	106 114	
-25	94 6330	94 5230	95 4940	95 4660	96 4390	112 118		-25	86 5510	86 4520	87 4210	88 3920	88 3670	106 113	
-20	96 6780	96 5590	97 5290	97 5000	98 4720	112 118		-20	88 5680	88 4650	88 4390	89 4130	90 3890	106 113	
-15	99 7360	98 6080	99 5760	99 5440	100 5140	113 118		-15	91 6140	90 5040	91 4760	91 4490	92 4220	107 113	
-10	103 8200	102 6770	102 6420	102 6070	103 5740	114 118		-10	94 6820	93 5600	94 5290	94 4990	95 4700	108 113	
-5	106 9130	105 7540	105 7160	105 6780	106 6410	115 118		-5	97 7560	96 6210	97 5870	97 5550	98 5230	109 113	
-2	107 9960	106 8030	107 7620	107 7220	107 6830	115 118		0	100 8340	99 6850	99 6490	100 6130	100 5780	109 113	
0	106 10710	107 8360	108 7930	108 7520	108 7110	116 118		5	103 9180	101 7540	102 7140	102 6760	102 6380	110 113	
5			110 8780	110 8320	110 7890	116 118		10	106 10220	104 8330	104 7910	104 7490	105 7090	111 113	

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS							
VENR = 119 KIAS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS		TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT						10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT		
-35	88 5460	88 4500	88 4190	88 3900	88 3620	103 112		-35	88 5480	88 4510	88 4210	88 3920	88 3640	101 111	
-30	88 5490	88 4520	88 4220	88 3920	88 3640	102 112		-30	88 5500	88 4530	88 4230	88 3940	88 3660	100 110	
-25	86 5490	86 4520	86 4210	86 3920	86 3630	102 111		-25	86 5500	86 4530	86 4230	86 3930	86 3650	100 110	
-20	84 5440	84 4470	84 4170	84 3870	84 3590	101 109		-20	84 5440	84 4480	84 4170	84 3880	84 3600	99 108	
-15	82 5390	82 4420	83 4120	83 3820	84 3540	100 107		-15	82 5390	82 4420	82 4120	82 3830	82 3550	98 106	
-10	85 5590	85 4550	85 4290	86 4030	86 3790	101 107		-10	80 5330	80 4370	81 4070	81 3780	82 3500	97 104	
-5	88 6170	88 5030	88 4740	89 4460	89 4190	102 107		-5	83 5530	83 4490	84 4220	84 3970	85 3720	98 104	
0	91 6780	90 5530	91 5220	91 4920	92 4620	103 107		0	86 6060	86 4930	86 4640	87 4360	87 4090	99 104	
5	94 7420	93 6060	93 5720	93 5400	94 5080	104 107		5	89 6630	88 5390	88 5080	89 4780	89 4490	100 104	
10	96 8170	95 6640	95 6280	96 5930	96 5580	104 107		10	91 7250	90 5900	91 5560	91 5240	91 4920	101 104	

Figure 7-4 (Sheet 12)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
12,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS								WEIGHT = 12200 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	104 8180	104 6660	105 6320	105 5980	106 5660	120 125		-35	104 7800	103 6470	104 6140	104 5810	105 5490	119 124					
-30	103 8640	105 6880	105 6530	106 6190	106 5860	120 125		-30	103 8160	104 6690	104 6350	105 6010	105 5690	119 124					
-25	102 9430	106 7280	107 6910	107 6550	108 6210	120 125		-25	102 8910	105 7070	105 6710	106 6360	106 6020	119 124					
-20	101 10460	108 7760	108 7380	109 7000	109 6630	121 125		-20	102 9870	107 7540	107 7170	107 6800	108 6440	120 124					
-15		110 8590	111 8130	111 7720	112 7320	122 125		-15		109 8300	110 7890	110 7490	110 7100	121 124					
-13		110 9280	112 8490	112 8070	113 7650	122 125		-12		111 8960	111 8430	112 8010	112 7590	121 124					
-12		110 9650	113 8690	113 8250	113 7830	122 125		-11		110 9340	112 8630	112 8190	113 7770	121 124					

WEIGHT = 12000 LBS								WEIGHT = 11500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	102 7560	102 6270	102 5940	103 5620	103 5310	118 123		-35	98 6970	98 5760	98 5450	99 5160	99 4860	115 120					
-30	103 7800	102 6470	103 6140	103 5820	104 5500	118 123		-30	99 7190	98 5950	99 5640	99 5330	100 5040	115 120					
-25	103 8330	104 6840	104 6490	104 6150	105 5820	118 123		-25	100 7580	100 6290	100 5960	101 5640	101 5330	115 120					
-20	102 9230	105 7300	106 6930	106 6570	106 6220	119 123		-20	102 8070	101 6700	102 6350	102 6020	103 5690	116 120					
-15		108 8020	108 7620	109 7230	109 6850	120 123		-15	104 8980	104 7350	104 6980	105 6620	105 6260	117 120					
-11		110 8760	111 8330	111 7910	111 7500	120 123		-10	103 10800	107 8210	107 7800	108 7400	108 7010	118 120					
-10		111 8970	111 8530	112 8100	112 7680	120 123		-8		108 8580	109 8160	109 7740	109 7330	118 120					
-8			112 8930	113 8480	113 8050	121 123		-5		110 9180	110 8720	111 8280	111 7850	118 120					

WEIGHT = 11000 LBS								WEIGHT = 10000 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	94 6420	94 5290	95 5000	95 4710	96 4440	111 118		-35	86 5610	86 4600	87 4290	88 3990	88 3710	106 113					
-30	95 6610	94 5460	95 5160	95 4880	96 4600	112 118		-30	87 5650	87 4640	87 4320	88 4070	88 3830	106 113					
-25	96 6970	96 5760	96 5450	97 5150	97 4860	112 118		-25	88 5840	88 4790	88 4530	89 4270	89 4010	106 113					
-20	98 7410	97 6130	98 5810	98 5490	99 5190	113 118		-20	89 6190	89 5090	90 4810	90 4540	91 4270	106 113					
-15	101 8120	100 6720	100 6370	101 6030	101 5700	114 118		-15	92 6760	92 5560	92 5260	93 4960	93 4680	107 113					
-10	104 9040	103 7490	103 7110	104 6730	104 6370	115 118		-10	96 7500	95 6180	95 5840	96 5520	96 5210	108 113					
-5	105 10590	106 8360	106 7940	107 7520	107 7120	115 118		-5	99 8330	98 6860	98 6500	99 6150	99 5800	109 113					
0		109 9270	109 8810	109 8360	109 7920	116 118		0	102 9210	100 7590	101 7190	101 6800	101 6430	110 113					
2			110 9190	110 8720	110 8280	116 118		2	103 9580	101 7890	102 7480	102 7080	102 6680	110 113					
								5	104 10210	103 8350	103 7910	103 7500	104 7100	111 113					
								10		105 9350	105 8890	106 8430	106 7990	111 113					

WEIGHT = 9000 LBS								WEIGHT = 8500 LBS											
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS
			10 KTS		20 KTS		30 KTS						10 KTS		20 KTS		30 KTS		
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-35	87 5590	87 4600	87 4290	87 3990	87 3700	102 111		-35	87 5590	87 4610	87 4300	87 4000	87 3720	100 110					
-30	86 5620	86 4630	86 4320	86 4010	86 3720	102 111		-30	86 5630	86 4640	86 4330	86 4030	86 3740	100 109					
-25	84 5600	84 4600	84 4290	84 3990	84 3700	101 109		-25	85 5600	85 4610	85 4300	85 4000	85 3710	99 108					
-20	83 5550	83 4560	83 4240	83 3940	83 3650	101 108		-20	83 5540	83 4550	83 4250	83 3950	83 3660	99 107					
-15	83 5560	83 4540	84 4280	84 4020	85 3780	100 107		-15	80 5500	80 4510	80 4200	81 3900	81 3610	98 105					
-10	87 6130	86 5010	87 4730	87 4450	88 4180	101 107		-10	82 5500	82 4480	82 4210	83 3960	83 3710	98 104					
-5	90 6780	89 5550	90 5240	90 4940	90 4640	102 107		-5	85 6070	84 4950	85 4660	85 4380	86 4110	99 104					
0	93 7460	92 6110	92 5770	92 5440	93 5120	103 107		0	88 6670	87 5430	88 5130	88 4820	88 4530	100 104					
5	95 8180	94 6690	94 6330	95 5970	95 5630	104 107		5	90 7290	89 5940	90 5610	90 5290	91 4970	100 104					
10	98 9120	96 7390	97 7000	97 6630	97 6260	105 107		10	93 8070	92 6530	92 6170	92 5820	93 5490	101 104					

Figure 7-4 (Sheet 13)



**TAKEOFF FIELD LENGTH - FEET**  
(OVER 15 FOOT SCREEN HEIGHT)

**FLAPS - UP**  
**13,000 FEET**

**CONDITIONS: WET RUNWAY**

**ANTI-ICE - ON**

**RUNWAY GRADIENT - ZERO**

**SPEED BRAKES - RETRACT**

**LANDING GEAR - DOWN**

**INOPERATIVE ENGINE - WINDMILLING AFTER V1**

**THRUST ATTENUATORS - AUTO**

**OPERATIVE ENGINE - TAKEOFF THRUST**

**SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.**

WEIGHT = 12375 LBS								VENR = 142 KIAS								WEIGHT = 12200 LBS								VENR = 141 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS													
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT													
-35	102 9410	106 7310	106 6940	107 6580	107 6230	120 125	-35	102 8890	105 7110	105 6750	105 6390	106 6050	119 124	-30	101 9410	106 7360	106 6990	106 6630	106 6280	119 124	-25	101 10300	107 7790	107 7410	107 7030	108 6660	120 124				
-20		109 8590	110 8130	110 7730	110 7330	121 125	-20		108 8300	108 7900	109 7500	109 7110	120 124	-15		109 9520	111 8740	111 8300	112 7880	121 124	-14		109 9910	112 8940	112 8500	112 8060	121 124				
-15			112 9150	113 8560	113 8130	122 125	-15			109 9520	111 8740	111 8300	112 7880	121 124	-14			112 9200	113 8700	113 8260	121 124										
-14			111 9550	113 8760	114 8320	122 125	-14				109 9910	112 8940	112 8500	112 8060	121 124																

WEIGHT = 12000 LBS								VENR = 139 KIAS								WEIGHT = 11500 LBS								VENR = 137 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS													
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT													
-35	103 8310	103 6880	104 6520	104 6180	104 5850	118 123	-35	100 7820	99 6320	100 5990	100 5670	101 5350	115 120	-30	102 8810	104 7120	104 6760	105 6410	105 6070	118 123	-30	100 7880	100 6550	100 6210	101 5880	101 5560	115 120				
-25	101 9640	105 7540	105 7160	106 6790	106 6430	119 123	-25	102 8320	101 6920	102 6570	102 6220	103 5890	116 120	-20	101 10670	107 8030	107 7630	107 7250	108 6870	119 123	-20	103 8940	103 7370	103 7000	104 6630	104 6280	116 120				
-20		109 8880	110 8440	110 8020	110 7610	120 123	-20	102 10510	105 8130	106 7730	106 7330	107 6940	117 120	-15		109 9470	111 8830	111 8390	111 7970	120 123	-15	102 10510	105 8130	106 7730	106 7330	107 6940	117 120				
-15			112 9270	112 8810	113 8360	121 123	-15		108 8900	108 8470	109 8040	109 7620	118 120	-11			110 9530	110 9070	110 8610	111 8170	118 120	-11		109 9110	109 8660	109 8220	109 7800	118 120			
-13							-13							-10							-10		110 9530	110 9070	110 8610	111 8170	118 120				
-11							-11							-8							-8										

WEIGHT = 11000 LBS								VENR = 133 KIAS								WEIGHT = 10000 LBS								VENR = 127 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS													
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT													
-35	96 7010	95 5790	96 5480	96 5180	97 4890	112 118	-35	87 5890	87 4830	88 4560	88 4300	89 4040	106 113	-30	96 7240	96 6000	96 5680	97 5370	97 5070	112 118	-30	88 6060	88 4980	88 4710	89 4440	89 4180	106 113				
-25	98 7640	97 6340	98 6000	98 5680	99 5370	113 118	-25	89 6390	89 5260	90 4970	90 4690	91 4420	106 113	-20	99 8120	99 6740	99 6390	100 6050	100 5720	113 118	-20	91 6770	91 5580	91 5280	92 4990	92 4700	107 113				
-20		102 8940	102 7430	102 7050	102 6680	103 6320	114 118	-20	94 7430	93 6130	94 5810	94 5490	95 5170	108 113	-15	104 10390	105 8300	105 7890	105 7480	106 7090	115 118	-15	97 8270	96 6830	97 6470	97 6120	98 5780	109 113			
-10			106 8690	106 8250	106 7830	107 7410	115 118	-10	101 9220	99 7610	100 7220	100 6830	100 6460	110 113	-8		108 9290	108 8830	108 8380	108 7940	108 7500	116 118	-8	103 10220	102 8410	102 7980	102 7560	103 7150	110 113		
-5							-5		104 9350	104 8890	105 8430	105 7990	111 113	5								5		105 9320	106 8850	106 8390	106 7930	111 113			
0							0							7								7									

WEIGHT = 9000 LBS								VENR = 119 KIAS								WEIGHT = 8500 LBS								VENR = 115 KIAS							
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS						VR V2 KIAS												
			10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS													
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT													
-35	85 5730	85 4710	85 4390	85 4080	85 3790	101 110	-35	85 5730	85 4720	85 4400	85 4090	85 3800	100 109	-30	84 5760	84 4730	84 4420	84 4110	84 3820	99 108	-30	84 5750	84 4740	84 4420	84 4110	84 3820	99 108				
-25	83 5720	83 4690	83 4370	83 4060	83 3770	101 108	-25	83 5700	83 4690	83 4370	83 4070	83 3770	99 107	-20	82 5670	82 4650	83 4330	83 4070	84 3830	100 107	-20	81 5660	81 4640	81 4320	81 4020	81 3720	98 106				
-20		88 6750	88 5530	88 5220	89 4920	89 4630	102 107	-20	81 5660	81 4640	81 4320	81 4020	81 3720	98 106	-15	85 6090	85 4990	85 4710	86 4430	86 4170	101 107	-15	80 5610	80 4590	81 4280	81 3970	82 3720	97 104			
-10			91 7480	91 6140	91 5800	91 5470	92 5150	103 107	-10	83 6040	83 4930	84 4650	84 4380	85 4110	98 104	-5	97 9110	93 7420	93 7020	96 6640	96 6270	104 107	-5	86 6690	86 5460	86 5150	87 4850	87 4560	99 104		
0							0		88 6000	89 5670	89 5340	90 5030	100 104	0		94 9530	96 7750	97 7340	97 6950	97 6570	105 107	0	89 7350	88 6000	89 5670	89 5340	90 5030	100 104			
5							5		91 6580	91 6210	91 5860	92 5520	101 104	5		99 10200	98 8290	98 7870	98 7450	99 7040	105 107	5	92 8070	91 6580	91 6210	91 5860	92 5520	101 104			
7							7		93 7300	93 6910	94 6530	94 6170	101 104	7								7	94 9010	93 7300	93 6910	94 6530	94 6170	101 104			
10							10							10								10									

Figure 7-4 (Sheet 14)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - UP  
14,000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - ON

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS							WEIGHT = 12200 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	100 10790	107 8030					108 7630	108 7250	108 6870	
-30		108 8380	108 7970	109 7570	109 7180	121 125	-30	100 10940	107 8140	107 7740	108 7350	108 6970	120 124
-25		108 9040	110 8410	110 8000	110 7590	121 125	-25		108 8580	108 8170	109 7760	109 7360	120 124
-20		107 10220	110 9190	112 8600	112 8170	122 125	-20		108 9540	110 8770	110 8340	111 7920	121 124
-18			110 9790	113 8900	113 8460	122 125	-18			111 9450	112 8820	112 8380	121 124
-17				113 9100	113 8640	122 125	-17			111 9830	112 9030	113 8580	121 124

WEIGHT = 12000 LBS							WEIGHT = 11500 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	102 9550	104 7550					105 7170	105 6800	106 6440	
-30	101 10230	105 7880	106 7490	106 7100	106 6730	119 123	-30	102 8680	101 7230	102 6870	102 6510	103 6160	116 120
-25		105 8300	107 7890	107 7500	108 7110	119 123	-25	102 9360	103 7620	103 7240	103 6860	104 6500	116 120
-20		108 8910	109 8480	109 8060	109 7640	120 123	-20	101 10470	104 8170	105 7760	105 7370	105 6980	117 120
-16		108 10080	111 9160	111 8710	111 8270	120 123	-16		107 9020	107 8580	108 8150	108 7730	118 120
-15			111 9380	111 8920	112 8470	120 123	-15		108 9440	109 8980	109 8530	109 8100	118 120
-13				113 9360	113 8890	121 123	-13			110 9630	111 9150	111 8690	118 120

WEIGHT = 11000 LBS							WEIGHT = 10000 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	97 7660	97 6350					97 6020	98 5690	98 5380	
-30	98 7970	98 6620	98 6280	98 5940	99 5620	113 118	-30	90 6660	89 5490	90 5200	90 4910	91 4620	106 113
-25	99 8380	99 6970	99 6610	100 6260	100 5920	113 118	-25	91 6990	91 5770	91 5460	92 5160	92 4870	107 113
-20	101 8970	100 7460	101 7090	101 6720	102 6360	114 118	-20	93 7460	92 6170	93 5840	93 5530	94 5210	107 113
-15	103 10140	103 8230	103 7820	104 7420	104 7030	115 118	-15	96 8190	95 6780	95 6430	96 6080	96 5750	108 113
-10		106 9210	106 8760	107 8310	107 7880	115 118	-10	99 9130	98 7560	98 7170	99 6790	99 6420	109 113
-5				110 9330	110 8850	116 118	-5	102 10190	101 8430	101 8000	101 7590	102 7180	110 113
-4					110 9080	116 118	-4	103 10410	101 8620	102 8180	102 7750	102 7330	110 113
							0	105 11400	103 9360	104 8900	104 8450	104 8010	111 113
							4				106 9280	106 8800	111 113

WEIGHT = 9000 LBS							WEIGHT = 8500 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT	
			-35	83 5870	83 4830					83 4500	83 4180	83 3880	
-30	83 5870	83 4820	83 4500	83 4180	83 3870	101 108	-30	83 5860	83 4820	83 4490	83 4180	83 3880	99 107
-25	82 5840	82 4790	83 4480	83 4220	84 3970	100 107	-25	81 5820	81 4780	81 4450	81 4140	81 3830	98 106
-20	84 6120	84 5020	84 4740	85 4470	85 4200	100 107	-20	79 5770	79 4730	80 4410	81 4090	81 3790	97 105
-15	87 6700	86 5500	87 5200	87 4900	88 4610	101 107	-15	82 6010	82 4910	82 4630	83 4360	83 4100	98 104
-10	90 7430	89 6110	90 5770	90 5450	90 5140	102 107	-10	85 6550	85 5440	85 5140	85 4840	86 4550	99 104
-5	93 8240	92 6780	92 6420	93 6060	93 5720	103 107	-5	88 7360	87 6030	88 5690	88 5370	89 5050	100 104
0	96 9120	94 7480	95 7080	95 6700	95 6320	104 107	0	91 8090	90 6630	90 6270	91 5920	91 5580	101 104
4	98 9960	96 8120	97 7700	97 7290	97 6900	105 107	5	93 9010	92 7320	92 6930	93 6550	93 6190	101 104
5	98 10190	97 8310	97 7880	97 7470	98 7060	105 107	8	95 9640	94 7830	94 7420	94 7020	94 6630	102 104
8	100 10910	98 8900	98 8450	99 8010	99 7580	105 107							



Figure 7-4 (Sheet 15)



Company Name

Balance Sheet

As of 12/31/2023

Assets

Current Assets

Accounts Receivable

Account	2023	2022
Accounts Receivable	1000	1000
Inventory	2000	2000
Prepaid Expenses	500	500
Other Current Assets	1000	1000
<b>Total Current Assets</b>	<b>4500</b>	<b>4500</b>

Account	2023	2022
Property, Plant, and Equipment	10000	10000
Accumulated Depreciation	(2000)	(2000)
Other Non-Current Assets	1000	1000
<b>Total Non-Current Assets</b>	<b>9000</b>	<b>9000</b>

Account	2023	2022
Accounts Payable	1000	1000
Long-Term Debt	5000	5000
Other Liabilities	1000	1000
<b>Total Liabilities</b>	<b>7000</b>	<b>7000</b>

Account	2023	2022
Common Stock	1000	1000
Retained Earnings	3500	3500
<b>Total Equity</b>	<b>4500</b>	<b>4500</b>



## MODEL 525A

### TAKEOFF FIELD LENGTH - FEET, FLAPS 15° (WET RUNWAY OVER A 15 FOOT SCREEN HEIGHT) (ANTI-ICE OFF)


Determine takeoff field length,  $V_1$ ,  $V_R$ ,  $V_2$  and  $V_{ENR}$  from Figure 7-6. If the runway has a gradient, adjust  $V_1$  and takeoff field length using figure 7-5.

If the required distance is greater than the available distance, the airplane weight must be reduced until distance required is less than or equal to distance available.

### TAKEOFF FIELD LENGTH WITH RUNWAY GRADIENT FLAPS 15°, ANTI-ICE OFF

ZERO RUNWAY GRADIENT	UPHILL GRADIENT				DOWNHILL GRADIENT			
	SHADED AND NON-SHADED				SHADED		NON-SHADED	
	2%	1.5%	1%	0.5%	-1%	-2%	-1%	-2%
	$V_1 + 8^*$ Knots	$V_1 + 6^*$ Knots	$V_1 + 4^*$ Knots	$V_1 + 2^*$ Knot	$V_1 - 4$ Knots	$V_1 - 7$ Knots	$V_1 + 1^*$ Knot	$V_1 + 1^*$ Knot
2400	2900	2800	2700	2600	2400	2300	2600	2650
2600	3150	3050	2900	2800	2600	2500	2800	2900
2800	3400	3300	3150	3000	2800	2700	3050	3150
3000	3650	3500	3350	3200	3000	2900	3250	3350
3200	3900	3750	3550	3400	3200	3100	3450	3600
3400	4150	3950	3800	3600	3400	3300	3650	3800
3600	4400	4200	4000	3850	3600	3500	3850	4000
3800	4650	4400	4250	4050	3800	3700	4050	4250
4000	4900	4650	4450	4250	4000	3900	4300	4450
4200	5150	4900	4650	4450	4200	4100	4500	4650
4400	5400	5150	4900	4650	4400	4300	4700	4900
4600	5650	5350	5100	4900	4600	4500	4900	5100
4800	5900	5600	5350	5100	4800	4700	5100	5300
5000	6150	5850	5550	5300	4950	4900	5350	5500
5200	6350	6050	5750	5500	5150	5100	5550	5750
5400	6600	6300	6000	5700	5300	5300	5750	5950
5600	6850	6500	6200	5900	5500	5500	5950	6150
5800	7100	6750	6400	6150	5700	5700	6150	6350
6000	7450	7000	6600	6350	5850	5850	6350	6500
6200	7800	7250	6850	6550	6050	6000	6500	6700
6400	8050	7500	7050	6750	6250	6150	6700	6900
6600	8250	7700	7250	6950	6400	6250	6900	7050
6800	8500	7900	7450	7150	6600	6350	7100	7250
7000	8750	8150	7650	7350	6800	6500	7300	7450
7200	8950	8350	7850	7550	6950	6650	7500	7650
7400	9200	8550	8050	7750	7150	6800	7700	7850
7600	9450	8750	8300	7950	7350	6950	7900	8050
7800	9700	9000	8500	8150	7500	7100	8100	8250
8000	10000	9250	8750	8400	7700	7300	8300	8450
8200	10300	9500	8950	8600	7850	7450	8500	8650
8400	10550	9700	9150	8800	8050	7600	8700	8850
8600	10850	9950	9400	9000	8250	7750	8900	9050
8800	11150	10200	9650	9200	8450	7900	9100	9250
9000	11450	10500	9900	9450	8600	8050	9300	9450
9500	12200	11150	10500	10000	9100	8450	9800	9950
10000	12900	11800	11100	10550	9600	8850	10300	10450
10500	13650	12450	11700	11100	10100	9250	10800	10950
11000	14350	13100	12300	11650	10600	9650	11300	11450
11500	15100	13800	12900	12200	11100	10050	11800	11950
12000		14450	13500	12750	11600	10450	12300	12450

\* If the adjusted  $V_1$  is greater than  $V_R$ , the value of  $V_R$  must be used for  $V_1$ .

 Figure 7-5



TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - 15°  
SEA LEVEL

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS							WEIGHT = 12200 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-25	93 4240	93 3370	93 3110	93 2850	93 2610	107 115	-25	93 4230	93 3370	93 3110	93 2850	93 2610	106 114
-20	93 4300	93 3430	93 3170	93 2910	93 2660	107 115	-20	93 4300	93 3430	93 3160	93 2910	93 2660	106 114
-15	93 4370	93 3490	93 3220	93 2960	93 2710	107 115	-15	93 4360	93 3490	93 3220	93 2960	93 2710	106 114
-10	93 4440	93 3560	93 3280	93 3020	93 2770	107 115	-10	93 4430	93 3550	93 3280	93 3020	93 2770	106 114
-5	93 4500	93 3620	93 3340	93 3080	93 2820	107 115	-5	93 4500	93 3610	93 3340	93 3070	93 2820	106 114
0	93 4570	93 3680	93 3400	93 3130	93 2880	107 115	0	93 4570	93 3670	93 3400	93 3130	93 2870	106 114
5	93 4640	93 3740	93 3460	93 3190	93 2930	107 115	5	93 4630	93 3730	93 3450	93 3190	93 2930	106 115
10	93 4710	93 3800	93 3520	93 3240	93 2980	107 115	10	93 4700	93 3790	93 3510	93 3240	93 2980	106 115
15	93 4770	93 3860	93 3570	93 3300	93 3040	107 115	15	93 4770	93 3850	93 3570	93 3300	93 3040	106 115
20	93 4840	93 3920	93 3640	93 3360	93 3090	107 115	20	93 4840	93 3920	93 3630	93 3360	93 3090	106 115
25	92 4850	92 3920	92 3640	92 3360	93 3120	107 115	25	92 4840	92 3920	92 3630	92 3350	92 3090	107 114
30	94 5110	93 4070	93 3820	94 3580	94 3340	108 115	30	92 4970	92 3960	92 3720	93 3480	93 3250	107 114
35	96 5490	95 4370	95 4110	96 3850	96 3590	108 115	35	95 5340	94 4250	94 3990	95 3740	95 3500	108 114
40	99 5930	97 4720	98 4440	98 4160	99 3890	109 114	40	97 5770	96 4590	96 4310	97 4040	97 3780	108 114
44	101 6370	99 5070	100 4760	100 4470	101 4180	110 115	45	100 6300	99 5010	99 4710	99 4420	100 4130	109 114
45	102 6490	100 5160	100 4850	101 4550	101 4260	110 115	46	101 6420	99 5110	100 4800	100 4500	100 4210	109 114

WEIGHT = 12000 LBS							WEIGHT = 11800 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-25	93 4220	93 3370	93 3100	93 2850	93 2610	105 114	-25	93 4220	93 3370	93 3100	93 2850	93 2610	104 113
-20	93 4290	93 3430	93 3160	93 2900	93 2660	105 114	-20	93 4280	93 3420	93 3160	93 2900	93 2660	104 113
-15	93 4360	93 3490	93 3220	93 2960	93 2710	105 114	-15	93 4350	93 3480	93 3220	93 2960	93 2710	104 113
-10	93 4420	93 3550	93 3280	93 3020	93 2760	105 114	-10	93 4420	93 3540	93 3270	93 3010	93 2760	104 113
-5	93 4490	93 3610	93 3330	93 3070	93 2820	105 114	-5	93 4480	93 3600	93 3330	93 3070	93 2820	104 113
0	93 4560	93 3670	93 3390	93 3130	93 2870	105 114	0	93 4550	93 3670	93 3390	93 3130	93 2870	104 113
5	93 4630	93 3730	93 3450	93 3180	93 2930	105 114	5	93 4620	93 3730	93 3450	93 3180	93 2930	104 113
10	93 4690	93 3790	93 3510	93 3240	93 2980	105 114	10	93 4690	93 3790	93 3510	93 3240	93 2980	104 113
15	93 4760	93 3850	93 3570	93 3300	93 3030	105 114	15	93 4750	93 3850	93 3560	93 3290	93 3030	104 113
20	93 4830	93 3910	93 3630	93 3350	93 3090	105 114	20	93 4820	93 3910	93 3620	93 3350	93 3090	104 113
25	92 4830	92 3910	92 3630	92 3350	92 3090	106 114	25	92 4820	92 3910	92 3620	92 3350	92 3080	105 113
30	91 4830	90 3840	91 3600	91 3370	92 3140	106 113	30	90 4720	90 3810	90 3530	90 3260	91 3050	105 113
35	93 5180	92 4120	93 3870	93 3620	94 3380	107 113	35	92 5020	91 3990	91 3740	92 3500	93 3270	106 112
40	96 5590	95 4450	95 4180	96 3910	96 3650	107 113	40	94 5420	93 4310	94 4040	94 3780	95 3530	106 112
45	99 6100	97 4840	98 4550	98 4270	98 3990	108 113	45	97 5900	96 4680	96 4390	97 4120	97 3850	107 112
46	99 6210	98 4930	98 4640	98 4350	99 4070	108 113	48	99 6240	97 4950	98 4650	98 4360	99 4080	107 112
48	101 6460	99 5130	99 4820	100 4520	100 4230	108 113	49	100 6360	98 5040	98 4740	99 4440	99 4150	107 112

WEIGHT = 11600 LBS							WEIGHT = 11400 LBS						
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS
			10 KTS	20 KTS	30 KTS					10 KTS	20 KTS	30 KTS	
			V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT					V1 DIST KIAS FT	V1 DIST KIAS FT	V1 DIST KIAS FT	
-25	93 4210	93 3360	93 3100	93 2850	93 2610	103 112	-25	93 4210	93 3360	93 3100	93 2850	93 2610	102 111
-20	93 4280	93 3420	93 3160	93 2900	93 2660	103 112	-20	93 4280	93 3420	93 3160	93 2900	93 2660	102 111
-15	93 4350	93 3480	93 3210	93 2960	93 2710	103 112	-15	93 4340	93 3480	93 3210	93 2960	93 2710	102 111
-10	93 4410	93 3540	93 3270	93 3010	93 2760	103 112	-10	93 4410	93 3540	93 3270	93 3010	93 2760	102 111
-5	93 4480	93 3600	93 3330	93 3070	93 2820	103 112	-5	93 4470	93 3600	93 3330	93 3070	93 2820	102 111
0	93 4550	93 3660	93 3390	93 3120	93 2870	103 112	0	93 4540	93 3660	93 3390	93 3120	93 2870	102 111
5	93 4610	93 3720	93 3450	93 3180	93 2920	103 112	5	93 4610	93 3720	93 3450	93 3180	93 2920	102 111
10	93 4680	93 3780	93 3500	93 3240	93 2980	103 112	10	93 4680	93 3780	93 3500	93 3240	93 2980	102 111
15	93 4750	93 3840	93 3560	93 3290	93 3030	103 112	15	93 4740	93 3840	93 3560	93 3290	93 3030	102 111
20	93 4820	93 3910	93 3620	93 3350	93 3090	103 112	20	93 4810	93 3900	93 3620	93 3350	93 3090	102 111
25	92 4820	92 3900	92 3620	92 3350	92 3080	103 112	25	92 4810	92 3900	92 3620	92 3340	92 3080	102 111
30	90 4710	90 3800	90 3520	90 3250	90 2990	104 112	30	90 4700	90 3800	90 3520	90 3250	90 2980	103 111
35	90 4870	89 3860	90 3620	91 3390	91 3160	105 111	35	89 4720	88 3740	89 3500	89 3270	90 3050	104 111
40	93 5260	92 4170	92 3910	93 3660	93 3420	105 111	40	91 5090	90 4030	91 3780	91 3540	92 3300	104 110
45	96 5700	94 4520	95 4240	95 3970	96 3710	106 111	45	94 5520	93 4370	93 4100	94 3840	94 3580	105 110
49	98 6140	96 4860	97 4570	97 4280	98 4000	106 111	50	97 6040	95 4780	96 4480	96 4200	97 3920	105 110
50	99 6250	97 4950	97 4650	98 4360	98 4070	106 111	51	98 6150	96 4860	96 4560	97 4280	97 4000	105 110
51	99 6370	97 5040	98 4740	98 4440	99 4150	107 111	53	99 6380	97 5040	97 4740	98 4440	98 4150	106 110

Figure 7-6 (Sheet 1 of 30)



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - 15°  
SEA LEVEL

CONDITIONS: WET RUNWAY  
RUNWAY GRADIENT - ZERO  
LANDING GEAR - DOWN  
THRUST ATTENUATORS - AUTO

ANTI-ICE - OFF  
SPEED BRAKES - RETRACT  
INOPERATIVE ENGINE - WINDMILLING AFTER V1  
OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS							WEIGHT = 10500 LBS																		
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS												
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT													
			-25	93	4200					93	3100	93		2850	93	2610	100	109	-25	94	4200	94	3370	94	3110
-20	93	4270	93	3160	93	2910	93	2660	100	109	-20	93	4270	93	3430	93	3160	93	2910	93	2670	97	107		
-15	93	4340	93	3220	93	2960	93	2710	100	109	-15	93	4340	93	3480	93	3220	93	2970	93	2720	97	107		
-10	93	4400	93	3270	93	3010	93	2770	100	109	-10	93	4400	93	3540	93	3280	93	3020	93	2780	97	107		
-5	93	4470	93	3330	93	3070	93	2820	100	109	-5	93	4470	93	3600	93	3330	93	3080	93	2830	97	107		
0	93	4540	93	3390	93	3130	93	2870	100	109	0	93	4530	93	3660	93	3390	93	3130	93	2880	97	107		
5	93	4600	93	3450	93	3180	93	2930	100	109	5	93	4600	93	3720	93	3450	93	3190	93	2940	97	107		
10	93	4670	93	3500	93	3240	93	2980	100	109	10	93	4670	93	3780	93	3510	93	3240	93	2990	97	107		
15	93	4730	93	3560	93	3290	93	3030	100	109	15	93	4730	93	3840	93	3570	93	3300	93	3040	97	107		
20	93	4800	93	3620	93	3350	93	3090	100	109	20	93	4800	93	3900	93	3620	93	3360	93	3100	97	107		
25	92	4800	92	3610	92	3340	92	3080	100	109	25	93	4790	93	3900	93	3620	93	3350	93	3090	98	107		
30	90	4690	90	3510	90	3240	90	2980	101	109	30	90	4680	90	3780	90	3510	90	3240	90	2980	98	107		
35	88	4580	88	3400	88	3140	88	2880	101	109	35	88	4560	88	3670	88	3400	88	3130	88	2880	99	107		
40	88	4760	87	3370	88	3100	89	2870	102	109	40	85	4440	85	3550	85	3280	85	3020	85	2800	99	106		
45	91	5160	90	4080	90	3830	91	3580	103	108	45	87	4740	86	3730	87	3490	87	3260	88	3030	100	106		
50	94	5620	92	4440	93	4160	93	3890	94	3630	103	108	50	90	5140	88	4050	89	3790	89	3540	90	3300	100	106
53	96	5930	94	4680	94	4390	95	4110	95	3840	104	108	55	93	5600	91	4410	91	4130	92	3860	92	3600	101	106
55	97	6150	95	4850	95	4550	96	4260	96	3980	104	108													

WEIGHT = 10000 LBS							WEIGHT = 9500 LBS																		
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS												
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT													
			-25	94	4210					94	3380	94		3120	94	2870	94	2630	96	107	-25	94	4230	94	3400
-20	94	4280	94	3440	94	3180	94	2930	94	2680	96	107	-20	94	4290	94	3460	94	3200	94	2950	94	2710	95	107
-15	94	4340	94	3500	94	3230	94	2980	94	2740	96	107	-15	94	4360	94	3510	94	3250	94	3000	94	2760	96	107
-10	94	4410	94	3550	94	3290	94	3030	94	2790	96	107	-10	94	4420	94	3570	94	3310	94	3050	94	2810	96	107
-5	94	4470	94	3610	94	3350	94	3090	94	2840	96	107	-5	94	4490	94	3630	94	3370	94	3110	94	2860	96	107
0	94	4540	94	3670	94	3400	94	3150	94	2900	96	107	0	94	4550	94	3690	94	3420	94	3170	94	2920	96	107
5	94	4610	94	3730	94	3460	94	3200	94	2950	96	107	5	94	4620	94	3750	94	3480	94	3220	94	2970	96	107
10	94	4670	94	3790	94	3520	94	3260	94	3000	96	107	10	94	4690	94	3810	94	3540	94	3280	94	3020	96	107
15	94	4740	94	3850	94	3580	94	3310	94	3050	96	107	15	94	4750	94	3870	94	3600	94	3330	94	3080	96	107
20	94	4800	94	3910	94	3640	94	3370	94	3110	97	107	20	94	4820	94	3930	94	3650	94	3390	94	3130	96	107
25	93	4790	93	3900	93	3620	93	3360	93	3100	96	106	25	93	4810	93	3920	93	3640	93	3370	93	3120	95	106
30	90	4670	90	3780	90	3510	90	3240	90	2990	95	105	30	90	4670	90	3790	90	3520	90	3350	90	3000	94	104
35	88	4540	88	3670	88	3390	88	3130	88	2880	96	104	35	88	4540	88	3670	88	3400	88	3130	88	2880	93	102
40	85	4420	85	3540	85	3270	85	3010	85	2760	96	104	40	85	4400	85	3540	85	3270	85	3010	85	2760	93	102
45	83	4340	82	3420	83	3180	83	2960	84	2750	97	104	45	83	4270	83	3410	83	3140	83	2890	83	2640	94	102
50	86	4700	85	3690	85	3450	86	3220	86	2990	98	104	50	81	4280	81	3340	81	3120	82	2900	82	2700	95	101
55	88	5090	87	4000	87	3740	88	3490	88	3240	98	103	55	84	4630	83	3620	84	3380	84	3150	85	2930	95	101

WEIGHT = 9000 LBS							WEIGHT = 8500 LBS																		
TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS	TEMP DEG C	TAILWIND 10 KTS V1 DIST KIAS FT	ZERO WIND V1 DIST KIAS FT	HEADWINDS			VR V2 KIAS												
			10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT					10 KTS V1 DIST KIAS FT	20 KTS V1 DIST KIAS FT	30 KTS V1 DIST KIAS FT													
			-25	94	4250					94	3430	94		3170	94	2920	94	2680	95	106	-25	94	4290	94	3460
-20	94	4320	94	3480	94	3220	94	2970	94	2730	95	106	-20	94	4360	94	3520	94	3260	94	3010	94	2770	94	106
-15	94	4380	94	3540	94	3280	94	3030	94	2790	95	106	-15	94	4420	94	3580	94	3320	94	3070	94	2830	94	106
-10	94	4450	94	3600	94	3340	94	3080	94	2840	95	107	-10	94	4490	94	3640	94	3380	94	3120	94	2880	94	106
-5	94	4510	94	3660	94	3390	94	3140	94	2890	95	107	-5	94	4550	94	3700	94	3430	94	3180	94	2930	94	106
0	94	4580	94	3720	94	3450	94	3190	94	2950	95	107	0	94	4620	94	3760	94	3490	94	3230	94	2980	94	107
5	94	4650	94	3780	94	3510	94	3250	94	3000	95	107	5	94	4690	94	3820	94	3550	94	3290	94	3040	94	107
10	94	4710	94	3840	94	3570	94	3300	94	3050	95	107	10	94	4750	94	3880	94	3610	94	3350	94	3090	94	107
15	94	4780	94	3900	94	3620	94	3360	94	3100	95	107	15	94	4820	94	3940	94	3670	94	3400	94	3150	94	107
20	94	4840	94	3960	94	3680	94	3420	94	3160	95	107	20	94	4890	94	4000	94	3720	94	3460	94	3200	94	107
25	93	4830	93	3940	93	3670	93	3400	93	3140	94	106	25	93	4860	93	3980	93	3700	93	3440	93	3180	93	106
30	90	4680	90	3810	90	3540	90	3270	90	3020	93	103	30	91	4710	91	3840	91	3560	91	3300	91	3050	92	103
35	88	4540	88	3680	88	3410	88	3150	88	2900	91	101	35	88	4560	88	3690	88	3430	88	3170	88	2920	90	101
40	85	4400	85	3540	85	3270	85	3020	85	2770	90	99	40	85	4400	85	3550	85	3280	85	3030	85	2780	88	98
45	83	4250	83	3400	83	3140	83	2880	83	2640	91	99	45	83	4250	83	3400	83	3140	83	2890	83	2650	88	97
50	80	4120	80	3270	80	3010	80	2760	80	2520	92	99	50	80	4100	80	3270	80	3010	80	2760	80	2520	88	96
55	80	4190	79	3260	79	3040	80	2830	81	2620	92	99	55	78	3970	78	3140	78	2890	78	2640	78	2410	89	96

Figure 7-6 (Sheet 2)



TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - 15°  
1000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

THRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 12375 LBS										VENR = 138 KIAS										WEIGHT = 12200 LBS										VENR = 137 KIAS									
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2 KIAS																
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS																			
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT																	
-25	93	4330	93	3460	93	3190	93	2930	93	2680	107	115	-25	93	4320	93	3460	93	3190	93	2930	93	2680	107	114														
-20	93	4400	93	3520	93	3250	93	2990	93	2730	107	115	-20	93	4390	93	3520	93	3240	93	2980	93	2730	107	114														
-15	93	4470	93	3580	93	3310	93	3040	93	2790	107	115	-15	93	4460	93	3580	93	3300	93	3040	93	2790	107	114														
-10	93	4540	93	3650	93	3370	93	3100	93	2850	107	115	-10	93	4530	93	3640	93	3360	93	3100	93	2840	107	114														
-5	93	4610	93	3710	93	3430	93	3160	93	2900	107	115	-5	93	4600	93	3700	93	3420	93	3160	93	2900	107	114														
0	93	4680	93	3770	93	3490	93	3220	93	2960	107	115	0	93	4670	93	3770	93	3490	93	3220	93	2960	107	114														
5	93	4750	93	3830	93	3550	93	3280	93	3010	107	115	5	93	4740	93	3830	93	3550	93	3270	93	3010	107	114														
10	93	4810	93	3890	93	3610	93	3330	93	3070	107	115	10	93	4810	93	3890	93	3600	93	3330	93	3060	107	114														
15	92	4860	92	3930	92	3640	92	3370	92	3120	107	115	15	92	4850	92	3930	92	3640	92	3360	92	3100	107	114														
20	92	4930	91	3940	92	3690	92	3450	93	3230	108	115	20	91	4860	91	3940	91	3650	91	3370	92	3140	107	114														
25	93	5140	92	4110	93	3860	94	3620	94	3380	108	115	25	92	5010	91	4000	92	3760	92	3520	93	3290	107	114														
30	95	5480	94	4380	95	4120	95	3860	96	3610	108	115	30	94	5340	93	4260	94	4010	94	3750	95	3510	107	114														
35	98	5880	96	4700	97	4420	97	4140	98	3880	109	115	35	96	5730	95	4570	96	4300	96	4030	97	3770	108	114														
40	101	6400	99	5110	99	4810	100	4510	100	4230	109	115	40	99	6220	98	4960	98	4670	98	4380	99	4100	109	114														
41	101	6520	99	5200	100	4900	100	4600	101	4310	110	115	42	100	6450	99	5140	99	4840	99	4540	100	4250	109	114														
42	102	6640	100	5300	100	4990	101	4680	101	4390	110	115	43	101	6580	99	5240	100	4930	100	4630	100	4340	109	114														

WEIGHT = 12000 LBS										VENR = 135 KIAS										WEIGHT = 11800 LBS										VENR = 134 KIAS									
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2 KIAS																
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS																			
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT																	
-25	93	4320	93	3450	93	3180	93	2930	93	2680	106	114	-25	93	4310	93	3450	93	3180	93	2920	93	2680	105	113														
-20	93	4390	93	3510	93	3240	93	2980	93	2730	106	114	-20	93	4380	93	3510	93	3240	93	2980	93	2730	105	113														
-15	93	4450	93	3570	93	3300	93	3040	93	2790	106	114	-15	93	4450	93	3570	93	3300	93	3040	93	2790	104	113														
-10	93	4520	93	3640	93	3360	93	3100	93	2840	106	114	-10	93	4520	93	3630	93	3360	93	3090	93	2840	104	113														
-5	93	4590	93	3700	93	3420	93	3150	93	2900	106	114	-5	93	4590	93	3690	93	3420	93	3150	93	2900	104	113														
0	93	4660	93	3760	93	3480	93	3210	93	2950	105	114	0	93	4660	93	3760	93	3480	93	3210	93	2950	104	113														
5	93	4730	93	3820	93	3540	93	3270	93	3010	105	114	5	93	4730	93	3820	93	3540	93	3270	93	3010	104	113														
10	93	4800	93	3880	93	3600	93	3330	93	3060	105	114	10	93	4790	93	3880	93	3600	93	3320	93	3060	104	113														
15	92	4840	92	3920	92	3630	92	3360	92	3090	106	114	15	92	4830	92	3920	92	3630	92	3360	92	3090	105	113														
20	91	4850	91	3930	91	3640	91	3370	91	3100	106	114	20	92	4850	92	3930	92	3640	92	3360	92	3100	105	113														
25	90	4870	90	3900	90	3640	91	3410	92	3180	106	113	25	90	4820	90	3900	90	3610	90	3330	90	3080	105	113														
30	93	5180	92	4130	92	3880	93	3630	93	3400	106	113	30	91	5020	90	4000	91	3760	91	3520	92	3280	105	112														
35	95	5550	94	4430	94	4160	95	3900	95	3640	107	113	35	93	5390	92	4290	93	4030	93	3780	94	3530	106	112														
40	98	6020	96	4800	97	4510	97	4230	97	3960	108	113	40	96	5830	95	4640	96	4360	96	4090	96	3820	106	112														
43	99	6360	98	5060	98	4760	98	4470	99	4180	108	113	45	99	6390	97	5080	98	4770	98	4480	98	4190	107	112														
45	101	6610	99	5260	99	4950	100	4640	100	4350	108	113	46	100	6510	98	5180	98	4870	99	4570	99	4270	107	112														

WEIGHT = 11600 LBS										VENR = 133 KIAS										WEIGHT = 11400 LBS										VENR = 132 KIAS									
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2 KIAS	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR V2 KIAS																
	10 KTS	V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS	10 KTS			V1 DIST	V1 DIST	10 KTS	20 KTS	30 KTS	10 KTS	20 KTS	30 KTS																			
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT			KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT																	
-25	93	4310	93	3450	93	3180	93	2920	93	2680	103	112	-25	93	4300	93	3440	93	3180	93	2920	93	2680	102	111														
-20	93	4370	93	3510	93	3240	93	2980	93	2730	103	112	-20	93	4370	93	3500	93	3240	93	2980	93	2730	102	111														
-15	93	4440	93	3570	93	3300	93	3040	93	2790	103	112	-15	93	4440	93	3570	93	3300	93	3040	93	2790	102	111														
-10	93	4510	93	3630	93	3360	93	3090	93	2840	103	112	-10	93	4510	93	3630	93	3350	93	3090	93	2840	102	111														
-5	93	4580	93	3690	93	3420	93	3150	93	2900	103	112	-5	93	4570	93	3690	93	3410	93	3150	93	2900	102	111														
0	93	4650	93	3750	93	3480	93	3210	93	2950	103	112	0	93	4640	93	3750	93	3470	93	3210	93	2950	102	111														
5	93	4720	93	3820	93	3540	93	3270	93	3010	103	112	5	93	4710	93	3810	93	3530	93	3270	93	3010	102	111														
10	93	4780	93	3880	93	3590	93	3320	93	3060	103	112	10	93	4780	93	3870	93	3590	93	3320	93	3060	102	111														
15	92	4830	92	3910	92	3630	92	3350	92	3090	103	112	15	92	4820	92	3910	92	3630	92	3350	92	3090	102	111														
20	92	4840	92	3920	92	3640	92	3360	92	3100	104	112	20	92	4830	92	3920	92	3630	92	3360	92	3090	103	111														
25	90	4810	90	3890	90	3600	90	3330	90	3070	104	112	25	90	4800	90	3880	90	3600	90	3330	90	3060	103	111														
30	90	4870	89	3880	89	3630	90	3400	91	3170	104	112	30	88	4720	88	3800	88	3520	89	3290	89	3070	103	111														
35	92	5220	91	4150	91	3900	92	3650	93	3410	105	111	35	90	5050	90	4020	90	3770	91	3530	91	3290	104	110														
40	95	5640	93	4490	94	4210	94	3950	95	3690	105	111	40	93	5460	92	4340	92	4070	93	3810	93	3560	104	110														
45	98	6170	96	4900	96	4610	97	4320	97	4040	106	111	45	96	5960	94	4730	95	4440	95	4160	96	3890	105	110														
46	98	6290	96	5000	97	4690	97																																



MODEL 525A

TAKEOFF FIELD LENGTH - FEET  
(OVER 15 FOOT SCREEN HEIGHT)

FLAPS - 15°  
1000 FEET

CONDITIONS: WET RUNWAY

ANTI-ICE - OFF

RUNWAY GRADIENT - ZERO

SPEED BRAKES - RETRACT

LANDING GEAR - DOWN

INOPERATIVE ENGINE - WINDMILLING AFTER V1

TRUST ATTENUATORS - AUTO

OPERATIVE ENGINE - TAKEOFF THRUST

SOME CONDITIONS DO NOT MEET CLIMB REQUIREMENTS. OBTAIN ALLOWABLE WEIGHT FROM MAXIMUM TAKEOFF WEIGHT TABLES.

WEIGHT = 11000 LBS										VENR = 130 KIAS						WEIGHT = 10500 LBS										VENR = 128 KIAS					
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2						
	10 KTS	V1 DIST	V1	DIST	10 KTS	20 KTS	30 KTS	V1	DIST	V1				DIST	V1	DIST	10 KTS	20 KTS	30 KTS	V1	DIST	V1	DIST			V1	DIST				
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT							
-25	93	4300	93	3440	93	3180	93	2920	93	2680	100	109	-25	93	4290	93	3450	93	3180	93	2930	93	2690	97	107						
-20	93	4360	93	3500	93	3240	93	2980	93	2730	100	109	-20	93	4360	93	3510	93	3240	93	2990	93	2740	97	107						
-15	93	4430	93	3560	93	3300	93	3040	93	2790	100	109	-15	93	4430	93	3570	93	3300	93	3040	93	2800	97	107						
-10	93	4500	93	3630	93	3350	93	3090	93	2840	100	109	-10	93	4500	93	3630	93	3360	93	3100	93	2850	97	107						
-5	93	4570	93	3690	93	3410	93	3150	93	2900	100	109	-5	93	4560	93	3690	93	3420	93	3160	93	2900	97	107						
0	93	4640	93	3750	93	3470	93	3210	93	2950	100	109	0	93	4630	93	3750	93	3480	93	3210	93	2960	97	107						
5	93	4710	93	3810	93	3530	93	3270	93	3010	100	109	5	93	4700	93	3810	93	3540	93	3270	93	3010	97	107						
10	93	4770	93	3870	93	3590	93	3320	93	3060	100	109	10	93	4760	93	3870	93	3590	93	3320	93	3070	97	107						
15	92	4810	92	3900	92	3620	92	3350	92	3090	100	109	15	93	4800	93	3900	93	3620	93	3350	93	3100	97	107						
20	92	4820	92	3910	92	3630	92	3360	92	3090	100	109	20	92	4810	92	3910	92	3630	92	3360	92	3100	98	107						
25	90	4780	90	3880	90	3590	90	3320	90	3060	101	109	25	90	4770	90	3870	90	3590	90	3320	90	3060	98	107						
30	88	4690	88	3790	88	3510	88	3240	88	2980	101	109	30	88	4670	88	3780	88	3500	88	3230	88	2970	98	107						
35	87	4740	87	3760	87	3520	87	3250	87	3000	102	109	35	86	4670	86	3760	86	3400	86	3130	86	2870	99	107						
40	90	5120	89	4060	89	3800	90	3560	91	3320	102	109	40	86	4700	85	3710	86	3470	86	3240	87	3020	100	106						
45	93	5560	91	4400	92	4130	92	3860	93	3610	103	108	45	89	5100	88	4030	88	3770	89	3530	89	3290	100	106						
50	96	6080	94	4810	94	4520	95	4230	95	3950	104	108	50	91	5540	90	4370	90	4100	91	3830	91	3570	101	106						
52	97	6320	95	4990	95	4690	96	4390	96	4110	104	108	52	93	5750	91	4530	91	4250	92	3980	92	3710	101	106						

WEIGHT = 10000 LBS										VENR = 126 KIAS						WEIGHT = 9500 LBS										VENR = 122 KIAS					
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2						
	10 KTS	V1 DIST	V1	DIST	10 KTS	20 KTS	30 KTS	V1	DIST	V1				DIST	V1	DIST	10 KTS	20 KTS	30 KTS	V1	DIST	V1	DIST			V1	DIST				
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT							
-25	93	4300	93	3460	93	3190	93	2940	93	2700	96	106	-25	93	4310	93	3470	93	3210	93	2960	93	2720	95	106						
-20	93	4360	93	3510	93	3250	93	3000	93	2750	96	106	-20	93	4380	93	3530	93	3270	93	3020	93	2770	95	106						
-15	93	4430	93	3580	93	3310	93	3050	93	2810	96	106	-15	93	4450	93	3590	93	3330	93	3070	93	2830	95	106						
-10	93	4500	93	3640	93	3370	93	3110	93	2860	96	106	-10	93	4510	93	3650	93	3390	93	3130	93	2880	95	106						
-5	93	4570	93	3700	93	3430	93	3170	93	2920	96	106	-5	93	4580	93	3720	93	3450	93	3190	93	2940	95	106						
0	93	4640	93	3760	93	3490	93	3220	93	2970	96	107	0	93	4650	93	3780	93	3510	93	3240	93	2990	95	106						
5	93	4700	93	3820	93	3550	93	3280	93	3030	96	107	5	93	4720	93	3840	93	3570	93	3300	93	3050	95	106						
10	93	4770	93	3880	93	3600	93	3340	93	3080	96	107	10	93	4780	93	3900	93	3620	93	3350	93	3100	95	106						
15	93	4800	93	3910	93	3630	93	3360	93	3110	96	106	15	93	4820	93	3930	93	3650	93	3380	93	3120	95	106						
20	92	4810	92	3910	92	3630	92	3370	92	3110	95	105	20	92	4820	92	3930	92	3650	92	3380	92	3120	95	105						
25	91	4770	91	3870	91	3590	91	3330	91	3070	95	105	25	91	4770	91	3880	91	3600	91	3340	91	3080	94	104						
30	88	4660	88	3770	88	3500	88	3230	88	2970	96	104	30	88	4660	88	3780	88	3500	88	3240	88	2980	93	102						
35	86	4550	86	3660	86	3390	86	3130	86	2870	96	104	35	86	4540	86	3660	86	3390	86	3130	86	2870	93	102						
40	83	4420	83	3540	83	3270	83	3010	83	2760	97	104	40	83	4400	83	3530	83	3260	83	3000	83	2750	94	102						
45	85	4660	84	3670	84	3430	85	3200	85	2980	97	104	45	81	4270	81	3400	81	3140	81	2890	82	2690	94	101						
50	87	5050	86	3980	87	3720	87	3470	88	3230	98	104	50	83	4590	82	3600	83	3370	83	3140	84	2920	95	101						
52	88	5220	87	4110	87	3850	88	3590	88	3340	98	103	52	84	4750	83	3720	84	3480	84	3240	85	3020	95	101						

WEIGHT = 9000 LBS										VENR = 118 KIAS						WEIGHT = 8500 LBS										VENR = 115 KIAS					
TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2	TEMP DEG C	TAILWIND		ZERO WIND		HEADWINDS						VR	V2						
	10 KTS	V1 DIST	V1	DIST	10 KTS	20 KTS	30 KTS	V1	DIST	V1				DIST	V1	DIST	10 KTS	20 KTS	30 KTS	V1	DIST	V1	DIST			V1	DIST				
	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT	KIAS	FT							
-25	93	4340	93	3500	93	3240	93	2990	93	2750	94	106	-25	94	4370	94	3540	94	3280	94	3030	94	2790	94	106						
-20	93	4400	93	3560	93	3300	93	3040	93	2800	94	106	-20	94	4440	94	3600	94	3330	94	3080	94	2840	94	106						
-15	93	4470	93	3620	93	3360	93	3100	93	2860	94	106	-15	94	4510	94	3660	94	3390	94	3140	94	2890	94	106						
-10	93	4540	93	3680	93	3410	93	3160	93	2910	94	106	-10	94	4580	94	3720	94	3450	94	3200	94	2950	94	106						
-5	93	4610	93	3740	93	3470	93	3210	93	2960	95	106	-5	94	4640	94	3780	94	3510	94	3250	94	3000	94	106						
0	93	4670	93	3800	93	3530	93	3270	93	3020	95	106	0	94	4710	94	3840	94	3570	94	3310	94	3060	94	106						
5	93	4740	93	3870	93	3590	93	3330	93	3070	95	106	5	94	4780	94	3900	94	3630	94	3370	94	3110	94	106						
10	93	4800	93	3920	93	3650	93	3380	93	3130	95	106	10	93	4840	93	3960	93	3690	93	3420	93	3160	94	106						
15	93	4840	93	3950	93	3680	93	3410	93	3150	94	106	15	93	4870	93	3990	93	3710	93	3450	93	3190	94	106						
20	92	4840	92	3950	92	3670	92	3410	92	3150	94	105	20	92	4870	92	3980	92	3710	92	3440	92	3180	93	105						
25	91	4780	91	3900	91	3620	91	3360	91	3100	93	104	25	91	4810	91	3930	91	3650	91	3390	91	3130	92	104						
30	89	4660	89	3790	89	3510	89	3250	89	3000	91	102	30	89	4680	89	3810	89	3530	89	3270	89	3020	91	101						
35	86	4530	86	3660	86	3390	86	3130	86	2880	90	99	35	86	4540	86	3680	86	3410	86	3150	86	2900	89	99						
40																															