FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - OFF
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
4	-30	4.3	4.9	5.2	5.5	5.9	4.8	5.6	5.9	6.3	6.7	5.6	6.5	6.9	7.3	7.7	7.5	8.7	9.2	9.7	10.3	9.8	11.3	11.9	12.6	13.4
0	-25	4.3	4.9	5.2	5.5	5.8	4.8	5.6	5.9	6.3	6.6	5.6	6.5	6.9	7.3	7.7	7.5	8.7	9.2	9.7	10.3	9.8	11.3	11.9	12.6	13.3
0	-20	4.3	5.0	5.2	5.5	5.8	4.9	5.6	5.9	6.3	6.6	5.7	6.5	6.9	7.3	7.7	7.5	8.7	9.2	9.7	10.3	9.8	11.3	11.9	12.6	13.3
0	-15	4.3	5.0	5.2	5.5	5.9	4.9	5.6	5.9	6.3	6.6	5.7	6.6	6.9	7.3	7.7	7.6	8.7	9.2	9.7	10.3	9.8	11.3	11.9	12.6	13.3
	-10	4.3	5.0	5.3	5.5	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.7	7.6	8.7	9.2	9.7	10.3	9.9	11.4	12.0	12.6	13.3
	-5	4.3	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.8	7.6	8.8	9.2	9.7	10.3	9.9	11.4	12.0	12.6	13.3
	0	4.3	4.9	5.2	5.5	5.8	4.9	5.6	5.9	6.2	6.6	5.7	6.5	6.9	7.2	7.7	7.6	8.7	9.1	9.6	10.2	9.8	11.3	11.9	12.5	13.2
	5	3.9	4.5	4.8	5.0	5.3	4.5	5.2	5.5	5.8	6.1	5.3	6.1	6.4	6.8	7.1	7.1	8.2	8.6	9.1	9.6	9.4	10.8	11.3	11.9	12.6
	10	3.4	3.9	4.2	4.4	4.6	4.0	4.6	4.8	5.1	5.4	4.7	5.4	5.7	6.0	6.4	6.5	7.5	7.9	8.3	8.8	8.7	10.0	10.5	11.1	11.7
	15	2.9	3.4	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.7	4.2	4.8	5.1	5.4	5.7	5.9	6.8	7.1	7.5	8.0	8.0	9.2	9.7	10.2	10.8
	20	2.4	2.8	3.0	3.2	3.4	3.0	3.4	3.6	3.8	4.1	3.7	4.3	4.5	4.7	5.0	5.3	6.1	6.5	6.8	7.2	7.4	8.5	8.9	9.4	10.0
	25	2.0	2.3	2.5	2.6	2.8	2.5	2.9	3.1	3.2	3.4	3.2	3.7	3.9	4.1	4.3	4.7	5.5	5.8	6.1	6.5	6.7	7.8	8.2	8.6	9.1
	30	1.3	1.6	1.7	1.8	1.9	1.8	2.1	2.2	2.4	2.5	2.4	2.9	3.0	3.2	3.4	4.0	4.6	4.8	5.1	5.4	5.8	6.7	7.1	7.5	8.0
	35	.5	.7	.7	.8	.9	1.0	1.2	1.3	1.4	1.5	1.6	1.9	2.0	2.1	2.3	3.0	3.5	3.7	3.9	4.2	4.7	5.5	5.8	6.2	6.5
	40	-.3	-.2	-.2	-.2	-.2	.1	.2	.3	.3	.4	.7	.9	1.0	1.0	1.1	2.0	2.4	2.6	2.7	2.9	3.7	4.3	4.6	4.8	5.1
	45	-1.0	-1.1	-1.1	-1.1	-1.1	-.6	-.6	-.6	-.6	-.6	-.1	.0	.0	.1	.1	1.2	1.4	1.5	1.6	1.8	2.7	3.2	3.4	3.6	3.8
	46	-1.2	-1.3	-1.3	-1.3	-1.4	-.8	-.8	-.8	-.9	-.9	-.3	-.2	-.2	-.2	-.2	.9	1.1	1.2	1.3	1.4	2.4	2.9	3.1	3.3	3.5
5	-35	4.3	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.8	7.6	8.8	9.2	9.8	10.3	9.8	11.4	12.0	12.7	13.4
0	-30	4.3	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.8	7.6	8.7	9.2	9.7	10.3	9.8	11.4	12.0	12.6	13.4
0	-25	4.3	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.8	7.6	8.8	9.2	9.7	10.3	9.9	11.4	12.0	12.6	13.4
0	-20	4.3	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.8	7.6	8.8	9.2	9.7	10.3	9.9	11.4	12.0	12.6	13.4
	-15	4.3	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	7.0	7.3	7.8	7.6	8.8	9.2	9.7	10.3	9.9	11.4	12.0	12.6	13.3
	-10	4.2	4.9	5.1	5.4	5.7	4.8	5.5	5.8	6.1	6.5	5.6	6.4	6.8	7.2	7.6	7.5	8.6	9.0	9.5	10.1	9.7	11.2	11.8	12.4	13.1
	-5	4.1	4.7	5.0	5.2	5.5	4.7	5.4	5.7	6.0	6.3	5.5	6.3	6.6	7.0	7.4	7.3	8.4	8.8	9.3	9.9	9.6	11.0	11.6	12.2	12.9
	0	3.8	4.4	4.6	4.9	5.2	4.4	5.1	5.3	5.6	5.9	5.2	6.0	6.3	6.6	7.0	7.0	8.0	8.5	8.9	9.4	9.2	10.6	11.1	11.7	12.4
	5	3.4	3.9	4.1	4.3	4.5	3.9	4.5	4.7	5.0	5.3	4.7	5.4	5.6	6.0	6.3	6.4	7.4	7.8	8.2	8.7	8.6	9.9	10.4	10.9	11.6
	10	2.9	3.3	3.5	3.7	3.9	3.4	3.9	4.1	4.4	4.6	4.1	4.8	5.0	5.3	5.6	5.8	6.7	7.0	7.4	7.8	7.9	9.1	9.6	10.1	10.7
	15	2.4	2.8	2.9	3.1	3.3	2.9	3.4	3.5	3.7	4.0	3.6	4.2	4.4	4.6	4.9	5.2	6.0	6.3	6.7	7.1	7.3	8.4	8.8	9.3	9.8
	20	2.0	2.3	2.4	2.6	2.7	2.5	2.9	3.0	3.2	3.4	3.2	3.7	3.9	4.1	4.3	4.7	5.5	5.8	6.1	6.4	6.7	7.7	8.2	8.6	9.1
	25	1.6	1.9	2.0	2.1	2.2	2.1	2.4	2.6	2.7	2.9	2.7	3.2	3.3	3.5	3.7	4.3	4.9	5.2	5.5	5.8	6.2	7.1	7.5	7.9	8.4
	30	.8	1.0	1.1	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	2.2	2.3	2.5	2.6	3.3	3.9	4.1	4.3	4.6	5.1	5.9	6.2	6.6	7.0
	35	.0	.1	.1	.2	.2	.4	.6	.6	.7	.8	1.0	1.2	1.3	1.4	1.5	2.4	2.8	3.0	3.1	3.3	4.1	4.7	5.0	5.3	5.6
	40	-.8	-.8	-.8	-.8	-.8	-.4	-.3	-.3	-.3	-.2	.2	.3	.4	.4	.5	1.5	1.8	1.9	2.0	2.2	3.1	3.6	3.8	4.0	4.3
	44	-1.4	-1.5	-1.5	-1.5	-1.5	-1.0	-1.0	-1.0	-1.0	-1.0	-.5	-.4	-.4	-.4	-.4	.7	.9	1.0	1.1	1.2	2.2	2.7	2.8	3.0	3.2
6	-35	4.4	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.4	6.7	5.7	6.6	7.0	7.4	7.8	7.6	8.8	9.3	9.8	10.4	9.9	11.4	12.0	12.7	13.4
0	-30	4.4	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.6	7.0	7.4	7.8	7.6	8.8	9.3	9.8	10.3	9.9	11.4	12.0	12.7	13.4
0	-25	4.4	5.0	5.3	5.6	5.9	5.0	5.7	6.0	6.3	6.7	5.7	6.6	7.0	7.4	7.8	7.6	8.8	9.3	9.8	10.3	9.9	11.4	12.0	12.7	13.4
0	-20	4.4	5.1	5.3	5.6	5.9	5.0	5.7	6.0	6.3	6.7	5.8	6.6	7.0	7.4	7.8	7.7	8.8	9.3	9.8	10.3	9.9	11.4	12.0	12.7	13.4
	-15	4.3	5.0	5.2	5.5	5.8	4.9	5.7	5.9	6.3	6.6	5.7	6.6	6.9	7.3	7.7	7.6	8.7	9.2	9.7	10.2	9.9	11.3	11.9	12.5	13.2
	-10	4.2	4.8	5.0	5.3	5.6	4.7	5.5	5.7	6.0	6.4	5.5	6.4	6.7	7.0	7.4	7.4	8.5	8.9	9.4	9.9	9.7	11.1	11.6	12.3	12.9
	-5	3.9	4.4	4.7	4.9	5.2	4.4	5.1	5.3	5.6	5.9	5.2	6.0	6.3	6.6	7.0	7.0	8.1	8.5	8.9	9.4	9.3	10.6	11.2	11.7	12.4
	0	3.3	3.8	4.0	4.2	4.5	3.9	4.5	4.7	4.9	5.2	4.6	5.3	5.6	5.9	6.2	6.3	7.3	7.7	8.1	8.6	8.5	9.8	10.3	10.8	11.5
	5	2.8	3.2	3.4	3.6	3.8	3.3	3.8	4.1	4.3	4.5	4.1	4.7	4.9	5.2	5.5	5.7	6.6	6.9	7.3	7.7	7.8	9.0	9.5	10.0	10.6
	10	2.3	2.7	2.8	3.0	3.2	2.8	3.3	3.5	3.7	3.9	3.5	4.1	4.3	4.5	4.8	5.1	5.9	6.2	6.6	7.0	7.2	8.3	8.7	9.2	9.7
	15	1.9	2.2	2.3	2.5	2.6	2.4	2.8	2.9	3.1	3.3	3.1	3.5	3.7	3.9	4.2	4.6	5.3	5.6	5.9	6.3	6.6	7.6	8.0	8.4	8.9
	20	1.5	1.7	1.8	2.0	2.1	2.0	2.3	2.4	2.6	2.7	2.6	3.0	3.2	3.4	3.6	4.1	4.8	5.0	5.3	5.6	6.0	6.9	7.3	7.7	8.2
	25	.9	1.1	1.2	1.3	1.4	1.4	1.7	1.8	1.9	2.0	2.0	2.4	2.5	2.7	2.8	3.5	4.1	4.3	4.5	4.8	5.3	6.1	6.5	6.8	7.2
	30	.2	.3	.4	.4	.5	.6	.8	.9	1.0	1.0	1.3	1.5	1.6	1.7	1.8	2.6	3.1	3.3	3.4	3.7	4.3	5.0	5.3	5.6	5.9
	35	-.5	-.5	-.5	-.5	-.4	-.1	.0	.0	.0	.1	.5	.6	.7	.7	.8	1.8	2.1	2.2	2.4	2.5	3.4	3.9	4.2	4.4	4.7
	40	-1.2	-1.3	-1.3	-1.3	-1.3	-.8	-.8	-.8	-.8	-.8	-.3	-.2	-.2	-.2	-.2	.9	1.1	1.2	1.3	1.4	2.4	2.9	3.0	3.2	3.4
	42	-1.5	-1.6	-1.7	-1.7	-1.7	-1.2	-1.2	-1.2	-1.2	-1.2	-.6	-.6	-.6	-.6	-.6	.6	.7	.8	.9	1.0	2.0	2.4	2.6	2.7	2.9
7	-35	4.4	5.1	5.3	5.6	6.0	5.0	5.8	6.1	6.4	6.8	5.8	6.7	7.0	7.4	7.8	7.7	8.8	9.3	9.8	10.4	10.0	11.5	12.1	12.7	13.4
0	-30	4.4	5.0	5.3	5.6	5.9	5.0	5.7	6.0	6.3	6.7	5.8	6.6	7.0	7.4	7.8	7.7	8.8	9.3	9.8	10.3	9.9	11.4	12.0	12.6	13.4
0	-25	4.3	5.0	5.2	5.5	5.8	4.9	5.7	5.9	6.3	6.6	5.7	6.6	6.9	7.3	7.7	7.6	8.7	9.2	9.7	10.2	9.9	11.3	11.9	12.5	13.2
0	-20	4.3	4.9	5.2	5.4	5.7	4.9	5.6	5.9	6.2	6.5	5.6	6.5	6.8	7.2	7.6	7.5	8.6	9.1	9.6	10.1	9.8	11.2	11.8	12.4	13.1
	-15	4.0	4.7	4.9	5.2	5.4	4.6	5.3	5.6	5.9	6.2	5.4	6.2	6.5	6.9	7.3	7.3	8.3	8.7	9.2	9.7	9.5	10.9	11.4	12.0	12.7
	-10	3.8	4.3	4.6	4.8	5.1	4.3	5.0	5.2	5.5	5.8	5.1	5.9	6.2	6.5	6.8	6.9	7.9	8.3	8.8	9.3	9.1	10.5	11.0	11.6	12.2
	-5	3.3	3.8	4.0	4.2	4.4	3.8	4.4	4.6	4.9	5.1	4.6	5.3	5.5	5.8	6.1	6.3	7.2	7.6	8.0	8.5	8.5	9.7	10.2	10.8	11.4
	0	2.8	3.2	3.4	3.5	3.7	3.3	3.8	4.0	4.2	4.4	4.0	4.6	4.8	5.1	5.4	5.7	6.5	6.9	7.2	7.6	7.8	8.9	9.4	9.9	10.4
	5	2.3	2.6	2.8	2.9	3.1	2.8	3.2	3.4	3.6	3.8	3.5	4.0	4.2	4.4	4.7	5.1	5.9	6.2	6.5	6.9	7.1	8.2	8.6	9.1	9.6
	10	1.8	2.1	2.2	2.4	2.5	2.3	2.7	2.8	3.0	3.1	3.0	3.4	3.6	3.8	4.0	4.5	5.2	5.5	5.8	6.1	6.5	7.4	7.8	8.3	8.7
	15	1.4	1.6	1.7	1.8	2.0	1.9	2.2	2.3	2.4	2.6	2.5	2.9	3.1	3.3	3.4	4.0	4.6	4.9	5.2	5.5	5.9	6.8	7.1	7.5	8.0
	20	1.0	1.2	1.2	1.3	1.4	1.4	1.7	1.8	1.9	2.0	2.1	2.4	2.6	2.7	2.9	3.5	4.1	4.3	4.5	4.8	5.3	6.2	6.5	6.8	7.2
	25	.4	.5	.5	.6	.7	.8	1.0	1.1	1.1	1.2	1.4	1.7	1.8	1.9	2.0	2.8	3.3	3.4	3.6	3.9	4.5	5.2	5.5	5.8	6.2
	30	-.3	-.3	-.2	-.2	-.2	.1	.2	.3	.3	.4	.7	.9	.9	1.0	1.1	2.0	2.4	2.5	2.7	2.8	3.6	4.2	4.5	4.7	5.0
	35	-1.0	-1.0	-1.0	-1.0	-1.0	-.6	-.6	-.5	-.5	-.5	.0	.1	.1	.1	.2	1.2	1.5	1.6	1.7	1.8	2.8	3.2	3.4	3.6	3.8
	40	-1.7	-1.8	-1.8	-1.9	-1.9	-1.3	-1.4	-1.4	-1.4	-1.4	-.8	-.8	-.8	-.8	-.8	.4	.5	.6	.7	.7	1.8	2.2	2.3	2.5	2.7

Figure 4-36 (Sheet 4)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - OFF
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																										
		12375					12200					12000					11800					11600						
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS						
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30		
8	-35	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.3	4.5	3.6	4.1	4.3	4.6	4.8	3.8	4.4	4.7	4.9	5.2	4.1	4.7	5.0	5.3	5.5		
0	-30	3.1	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.8	3.8	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.2	5.5		
0	-25	3.0	3.5	3.7	3.9	4.1	3.3	3.8	3.9	4.2	4.4	3.5	4.0	4.3	4.5	4.7	3.8	4.3	4.6	4.8	5.1	4.0	4.6	4.9	5.1	5.4		
0	-20	2.9	3.4	3.6	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.6	3.7	4.2	4.4	4.7	4.9	3.9	4.5	4.7	5.0	5.3		
	-15	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.7		
	-10	2.0	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0		
	-5	1.5	1.8	1.9	2.0	2.2	1.7	2.0	2.2	2.3	2.4	2.0	2.3	2.4	2.6	2.7	2.2	2.6	2.7	2.9	3.0	2.5	2.8	3.0	3.2	3.3		
	0	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4	2.0	2.3	2.4	2.5	2.7		
	5	.6	.8	.9	.9	1.0	.8	1.0	1.1	1.2	1.3	1.0	1.3	1.3	1.4	1.5	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1		
	10	.2	.3	.4	.4	.5	.4	.6	.6	.7	.7	.6	.8	.8	.9	1.0	.8	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.4	1.5		
	15	-.1	-.1	.0	.0	.0	.0	.1	.2	.2	.2	.2	.3	.4	.4	.5	.4	.6	.6	.7	.8	.6	.8	.9	1.0	1.0		
	20	-.6	-.5	-.5	-.5	-.5	-.4	-.3	-.3	-.3	-.3	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.2	.2	.2	.3	.4	.4	.5		
	25	-1.1	-1.1	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.5	-.5	-.5	-.4	-.3	-.3	-.3	-.3		
	30	-1.7	-1.8	-1.8	-1.9	-1.9	-1.5	-1.6	-1.6	-1.7	-1.7	-1.3	-1.4	-1.4	-1.5	-1.5	-1.2	-1.2	-1.2	-1.2	-1.3	-1.0	-1.0	-1.0	-1.0	-1.0		
	35	-2.3	-2.4	-2.5	-2.6	-2.6	-2.1	-2.3	-2.3	-2.4	-2.5	-2.0	-2.1	-2.1	-2.2	-2.3	-1.8	-1.9	-2.0	-2.0	-2.0	-1.6	-1.7	-1.7	-1.8	-1.8		
	37	-2.7	-2.9	-2.9	-3.0	-3.1	-2.5	-2.7	-2.8	-2.9	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7	-2.2	-2.3	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.3		
9	-35	2.9	3.4	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.6	3.7	4.2	4.4	4.6	4.9	3.9	4.5	4.7	5.0	5.3		
0	-30	2.8	3.2	3.4	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.5	4.7	3.8	4.3	4.6	4.8	5.1		
0	-25	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.5	3.6	3.8	3.1	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	3.6	4.2	4.4	4.6	4.9		
0	-20	2.3	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.1	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.5		
	-15	1.9	2.3	2.4	2.5	2.7	2.1	2.5	2.6	2.8	2.9	2.4	2.8	2.9	3.1	3.2	2.6	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9		
	-10	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.3	2.4	2.5	2.7	2.2	2.5	2.7	2.8	3.0	2.4	2.8	3.0	3.1	3.3		
	-5	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.4	2.5	2.7		
	0	.6	.7	.8	.9	.9	.8	.9	1.0	1.1	1.2	1.0	1.2	1.3	1.4	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0		
	5	.2	.3	.3	.3	.4	.3	.5	.5	.6	.6	.5	.7	.8	.8	.9	.8	.9	1.0	1.1	1.2	1.0	1.2	1.3	1.4	1.5		
	10	-.2	-.2	-.2	-.1	-.1	-.1	.0	.1	.1	.1	.1	.2	.3	.3	.4	.4	.5	.5	.6	.7	.6	.7	.8	.9	.9		
	15	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.4	-.2	-.2	-.2	-.1	-.1	.0	.0	.1	.1	.2	.2	.3	.3	.4	.4		
	20	-1.1	-1.1	-1.1	-1.1	-1.1	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.5	-.5	-.4	-.3	-.3	-.2	-.2	-.2		
	25	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.6	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-.9	-.9	-.9	-.9	-.9		
	30	-2.1	-2.2	-2.3	-2.3	-2.4	-1.9	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.6		
	35	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0	-2.4	-2.6	-2.6	-2.7	-2.8	-2.2	-2.4	-2.5	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4		
1	-35	2.6	3.0	3.2	3.4	3.6	2.9	3.3	3.5	3.6	3.8	3.1	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	3.6	4.2	4.4	4.6	4.9		
0	-30	2.4	2.8	3.0	3.1	3.3	2.6	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.6		
0	-25	2.2	2.6	2.7	2.9	3.0	2.4	2.8	3.0	3.1	3.3	2.7	3.1	3.3	3.4	3.6	2.9	3.4	3.6	3.7	3.9	3.2	3.7	3.9	4.1	4.3		
0	-20	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.1	3.2	3.4	2.8	3.2	3.4	3.5	3.7		
0	-15	1.4	1.7	1.7	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.3	2.4	2.5	2.1	2.4	2.5	2.7	2.8	2.3	2.7	2.8	3.0	3.2		
	-10	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	2.0	1.6	1.9	2.0	2.1	2.3	1.9	2.2	2.3	2.4	2.6		
	-5	.5	.7	.7	.8	.8	.7	.9	.9	1.0	1.1	.9	1.1	1.2	1.3	1.4	1.1	1.4	1.5	1.5	1.6	1.4	1.6	1.7	1.8	1.9		
	0	.1	.2	.2	.3	.3	.3	.4	.4	.5	.5	.5	.6	.7	.7	.8	.7	.9	.9	1.0	1.1	.9	1.1	1.2	1.3	1.4		
	5	-.3	-.3	-.3	-.2	-.2	-.1	-.1	.0	.0	.0	.1	.2	.2	.2	.3	.3	.4	.4	.5	.5	.5	.6	.7	.7	.8		
	10	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.5	-.5	-.5	-.3	-.3	-.3	-.2	-.2	-.1	.0	.0	.0	.0	.1	.2	.2	.3	.3		
	15	-1.1	-1.1	-1.1	-1.1	-1.1	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.5	-.5	-.4	-.3	-.3	-.2	-.2	-.2		
	20	-1.5	-1.6	-1.6	-1.7	-1.7	-1.4	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.2	-1.3	-1.3	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.8		
	25	-2.0	-2.1	-2.2	-2.2	-2.3	-1.8	-2.0	-2.0	-2.0	-2.1	-1.7	-1.8	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4		
	30	-2.5	-2.7	-2.8	-2.8	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7	-2.2	-2.3	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.3	-1.8	-2.0	-2.0	-2.0	-2.1		
	33	-3.0	-3.2	-3.3	-3.4	-3.5	-2.8	-3.0	-3.1	-3.2	-3.3	-2.7	-2.9	-3.0	-3.0	-3.1	-2.5	-2.7	-2.8	-2.8	-2.9	-2.3	-2.5	-2.6	-2.6	-2.7		
1	-35	2.2	2.5	2.6	2.8	2.9	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.2	3.3	3.5	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2		
1	-30	2.0	2.3	2.4	2.5	2.7	2.2	2.5	2.6	2.8	2.9	2.4	2.8	2.9	3.1	3.3	2.7	3.1	3.2	3.4	3.6	2.9	3.4	3.5	3.7	3.9		
0	-25	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.5	2.6	2.1	2.5	2.6	2.7	2.9	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.2	3.4	3.5		
0	-20	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.3	2.4	2.5	2.7	2.2	2.5	2.7	2.8	3.0		
0	-15	.9	1.1	1.1	1.2	1.3	1.1	1.3	1.4	1.4	1.5	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4		
	-10	.5	.6	.7	.7	.8	.7	.8	.9	.9	1.0	.9	1.1	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9		
	-5	.0	.1	.2	.2	.2	.2	.3	.4	.4	.5	.4	.5	.6	.7	.7	.6	.8	.9	.9	1.0	.9	1.0	1.1	1.2	1.3		
	0	-.4	-.3	-.3	-.3	-.3	-.2	-.2	-.1	-.1	-.1	.0	.1	.1	.1	.2	.2	.3	.4	.4	.4	.4	.6	.6	.7	.7		
	5	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.3	-.3	-.2	-.1	-.1	-.1	-.1	.0	.1	.1	.2	.2		
	10	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.5	-.4	-.3	-.3	-.3	-.3		
	15	-1.5	-1.6	-1.6	-1.7	-1.7	-1.4	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.3	-1.3	-1.3	-1.0	-1.0	-1.0	-1.0	-1.1	-.8	-.8	-.8	-.8	-.8		
	20	-2.0	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-2.0	-2.0	-2.0	-1.6	-1.7	-1.8	-1.8	-1.8	-1.4	-1.5	-1.5	-1.6	-1.6	-1.3	-1.3	-1.3	-1.3	-1.4		
	25	-2.4	-2.6	-2.6	-2.7	-2.8	-2.2	-2.4	-2.5	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4	-1.9	-2.0	-2.1	-2.1	-2.2	-1.7	-1.8	-1.9	-1.9	-1.9		
	30	-2.9	-3.2	-3.3	-3.3	-3.4	-2.8	-3.0	-3.1	-3.2	-3.3	-2.6	-2.8	-2.9	-3.0	-3.1	-2.5	-2.7	-2.7	-2.8	-2.9	-2.3	-2.5	-2.5	-2.6	-2.7		
	31	-3.1	-3.4	-3.5	-3.6	-3.7	-3.0	-3.2	-3.3	-3.4	-3.5	-2.8	-3.1	-3.1	-3.2	-3.3	-2.7	-2.9	-2.9	-3.0	-3.1	-2.5	-2.7	-2.8	-2.8	-2.9		

Figure 4-36 (Sheet 5)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - OFF
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
8	-35	4.4	5.1	5.3	5.6	5.9	5.0	5.7	6.0	6.4	6.7	5.8	6.6	7.0	7.4	7.8	7.7	8.8	9.3	9.8	10.3	10.0	11.4	12.0	12.6	13.3
0	-30	4.4	5.0	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.6	5.7	6.6	6.9	7.3	7.7	7.7	8.8	9.2	9.7	10.2	9.9	11.4	11.9	12.5	13.2
0	-25	4.3	5.0	5.2	5.5	5.8	4.9	5.6	5.9	6.2	6.6	5.7	6.5	6.9	7.2	7.6	7.6	8.7	9.1	9.6	10.2	9.9	11.3	11.8	12.5	13.1
0	-20	4.2	4.8	5.1	5.3	5.6	4.8	5.5	5.8	6.1	6.4	5.6	6.4	6.7	7.1	7.5	7.5	8.5	9.0	9.4	10.0	9.7	11.1	11.7	12.3	12.9
	-15	3.7	4.3	4.5	4.7	5.0	4.3	4.9	5.2	5.5	5.8	5.1	5.8	6.1	6.4	6.8	6.9	7.9	8.3	8.7	9.2	9.1	10.4	10.9	11.5	12.1
	-10	3.2	3.7	3.9	4.1	4.4	3.8	4.4	4.6	4.8	5.1	4.5	5.2	5.5	5.8	6.1	6.3	7.2	7.5	7.9	8.4	8.4	9.7	10.1	10.7	11.2
	-5	2.7	3.1	3.3	3.5	3.7	3.2	3.7	3.9	4.1	4.4	4.0	4.5	4.8	5.0	5.3	5.6	6.4	6.8	7.1	7.5	7.7	8.8	9.3	9.8	10.3
	0	2.2	2.6	2.7	2.8	3.0	2.7	3.1	3.3	3.5	3.7	3.4	3.9	4.1	4.4	4.6	5.0	5.8	6.1	6.4	6.7	7.0	8.1	8.5	8.9	9.4
	5	1.7	2.0	2.2	2.3	2.4	2.2	2.6	2.7	2.9	3.1	2.9	3.4	3.5	3.7	3.9	4.5	5.1	5.4	5.7	6.0	6.4	7.3	7.7	8.1	8.6
	10	1.3	1.5	1.6	1.7	1.8	1.8	2.1	2.2	2.3	2.5	2.4	2.8	3.0	3.1	3.3	3.9	4.5	4.8	5.0	5.3	5.8	6.6	7.0	7.4	7.8
	15	.9	1.1	1.1	1.2	1.3	1.3	1.6	1.7	1.8	1.9	2.0	2.3	2.4	2.6	2.7	3.4	4.0	4.2	4.4	4.7	5.2	6.0	6.3	6.7	7.1
	20	.4	.6	.6	.7	.7	.9	1.1	1.1	1.2	1.3	1.5	1.8	1.9	2.0	2.1	2.9	3.4	3.5	3.7	4.0	4.6	5.3	5.6	5.9	6.3
	25	-.2	-.1	-.1	-.1	.0	.2	.4	.4	.5	.5	.8	1.0	1.1	1.2	1.3	2.2	2.5	2.7	2.8	3.0	3.8	4.4	4.7	4.9	5.2
	30	-.8	-.8	-.8	-.8	-.8	-.4	-.3	-.3	-.3	-.3	.2	.3	.3	.4	.4	1.4	1.7	1.8	2.0	2.1	3.0	3.5	3.7	3.9	4.2
	35	-1.4	-1.5	-1.5	-1.6	-1.6	-1.1	-1.1	-1.1	-1.1	-1.1	-.5	-.5	-.5	-.5	-.5	.7	.9	.9	1.0	1.1	2.2	2.5	2.7	2.9	3.0
	37	-1.8	-2.0	-2.0	-2.1	-2.1	-1.5	-1.5	-1.6	-1.6	-1.6	-1.0	-1.0	-1.0	-1.0	-1.0	.2	.3	.4	.4	.5	1.6	1.9	2.1	2.2	2.3
9	-35	4.2	4.8	5.1	5.3	5.6	4.8	5.5	5.8	6.1	6.4	5.6	6.4	6.7	7.1	7.5	7.5	8.6	9.0	9.5	10.0	9.7	11.1	11.7	12.3	12.9
0	-30	4.1	4.7	4.9	5.2	5.4	4.6	5.3	5.6	5.9	6.2	5.4	6.2	6.5	6.9	7.3	7.3	8.3	8.8	9.2	9.7	9.5	10.9	11.4	12.0	12.7
0	-25	3.9	4.5	4.7	5.0	5.2	4.5	5.1	5.4	5.7	6.0	5.3	6.0	6.3	6.7	7.0	7.1	8.1	8.5	9.0	9.5	9.3	10.7	11.2	11.8	12.4
0	-20	3.6	4.1	4.3	4.6	4.8	4.2	4.8	5.0	5.3	5.6	4.9	5.6	5.9	6.2	6.6	6.7	7.7	8.1	8.5	9.0	8.9	10.2	10.7	11.2	11.8
	-15	3.2	3.6	3.8	4.0	4.2	3.7	4.3	4.5	4.7	5.0	4.4	5.1	5.3	5.6	5.9	6.1	7.1	7.4	7.8	8.2	8.3	9.5	10.0	10.5	11.1
	-10	2.7	3.1	3.3	3.4	3.6	3.2	3.7	3.9	4.1	4.3	3.9	4.5	4.7	5.0	5.3	5.6	6.4	6.7	7.1	7.5	7.7	8.8	9.2	9.7	10.2
	-5	2.2	2.5	2.7	2.8	3.0	2.7	3.1	3.3	3.4	3.6	3.4	3.9	4.1	4.3	4.5	5.0	5.7	6.0	6.3	6.7	7.0	8.0	8.4	8.9	9.3
	0	1.7	2.0	2.1	2.2	2.3	2.2	2.5	2.7	2.8	3.0	2.8	3.3	3.5	3.7	3.9	4.4	5.0	5.3	5.6	5.9	6.3	7.2	7.6	8.0	8.5
	5	1.2	1.5	1.5	1.6	1.8	1.7	2.0	2.1	2.2	2.4	2.3	2.7	2.9	3.0	3.2	3.8	4.4	4.7	4.9	5.2	5.7	6.5	6.9	7.3	7.7
	10	.8	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	2.2	2.3	2.5	2.6	3.3	3.9	4.1	4.3	4.5	5.1	5.9	6.2	6.5	6.9
	15	.4	.5	.6	.6	.7	.8	1.0	1.1	1.2	1.3	1.4	1.7	1.8	1.9	2.0	2.8	3.3	3.5	3.7	3.9	4.6	5.3	5.5	5.8	6.2
	20	-.1	.0	.0	.0	.1	.3	.5	.5	.6	.6	.9	1.1	1.2	1.3	1.4	2.3	2.6	2.8	2.9	3.1	3.9	4.5	4.8	5.0	5.3
	25	-.7	-.6	-.6	-.6	-.6	-.3	-.2	-.2	-.1	-.1	.3	.4	.5	.5	.6	1.6	1.9	2.0	2.1	2.3	3.2	3.7	3.9	4.1	4.4
	30	-1.2	-1.3	-1.3	-1.3	-1.3	-.8	-.8	-.8	-.8	-.8	-.3	-.2	-.2	-.2	-.2	.9	1.1	1.2	1.3	1.4	2.4	2.9	3.0	3.2	3.4
	35	-1.9	-2.0	-2.1	-2.1	-2.2	-1.5	-1.6	-1.6	-1.7	-1.7	-1.0	-1.0	-1.1	-1.1	-1.1	.1	.3	.3	.3	.4	1.6	1.9	2.0	2.1	2.3
1	-35	3.9	4.5	4.7	5.0	5.2	4.5	5.2	5.4	5.7	6.0	5.3	6.1	6.4	6.7	7.1	7.1	8.2	8.6	9.0	9.5	9.4	10.7	11.2	11.8	12.4
0	-30	3.7	4.2	4.5	4.7	4.9	4.3	4.9	5.2	5.4	5.7	5.0	5.8	6.1	6.4	6.7	6.9	7.8	8.2	8.7	9.1	9.1	10.4	10.9	11.4	12.0
0	-25	3.5	4.0	4.2	4.4	4.6	4.0	4.6	4.9	5.1	5.4	4.8	5.5	5.8	6.1	6.4	6.6	7.5	7.9	8.3	8.8	8.8	10.0	10.5	11.1	11.6
0	-20	3.0	3.5	3.7	3.9	4.1	3.6	4.1	4.3	4.6	4.8	4.3	5.0	5.2	5.5	5.8	6.0	6.9	7.2	7.6	8.0	8.2	9.3	9.8	10.3	10.9
0	-15	2.6	3.0	3.1	3.3	3.5	3.1	3.6	3.8	4.0	4.2	3.8	4.4	4.6	4.9	5.1	5.5	6.3	6.6	6.9	7.3	7.5	8.6	9.1	9.5	10.1
	-10	2.1	2.5	2.6	2.7	2.9	2.6	3.1	3.2	3.4	3.6	3.3	3.8	4.0	4.2	4.5	4.9	5.6	5.9	6.2	6.6	6.9	7.9	8.3	8.8	9.2
	-5	1.6	1.9	2.0	2.1	2.3	2.1	2.5	2.6	2.7	2.9	2.8	3.2	3.4	3.6	3.8	4.3	5.0	5.2	5.5	5.8	6.2	7.2	7.5	7.9	8.4
	0	1.2	1.4	1.5	1.6	1.7	1.6	1.9	2.0	2.2	2.3	2.3	2.7	2.8	3.0	3.1	3.8	4.3	4.6	4.8	5.1	5.6	6.4	6.8	7.1	7.5
	5	.7	.9	.9	1.0	1.1	1.2	1.4	1.5	1.6	1.7	1.8	2.1	2.2	2.4	2.5	3.2	3.7	3.9	4.2	4.4	5.0	5.8	6.1	6.4	6.8
	10	.3	.4	.5	.5	.6	.8	.9	1.0	1.1	1.2	1.4	1.6	1.7	1.8	1.9	2.8	3.2	3.4	3.6	3.8	4.5	5.2	5.4	5.7	6.0
	15	-.1	.0	.0	.0	.1	.3	.5	.5	.6	.6	.9	1.1	1.2	1.3	1.4	2.3	2.7	2.8	3.0	3.1	3.9	4.5	4.8	5.0	5.3
	20	-.6	-.6	-.6	-.6	-.5	-.2	-.1	-.1	-.1	.0	.4	.5	.6	.6	.7	1.7	2.0	2.1	2.2	2.4	3.3	3.8	4.0	4.2	4.5
	25	-1.1	-1.1	-1.1	-1.2	-1.2	-.7	-.7	-.7	-.7	-.7	-.2	-.1	-.1	.0	.0	1.1	1.3	1.4	1.5	1.6	2.6	3.0	3.2	3.4	3.6
	30	-1.7	-1.8	-1.8	-1.8	-1.9	-1.3	-1.3	-1.3	-1.4	-1.4	-.8	-.8	-.8	-.8	-.8	.4	.6	.6	.7	.7	1.9	2.2	2.3	2.5	2.6
	33	-2.2	-2.3	-2.4	-2.4	-2.5	-1.8	-1.9	-1.9	-2.0	-2.0	-1.3	-1.4	-1.4	-1.4	-1.4	-.2	-.1	-.1	.0	.0	1.2	1.5	1.6	1.7	1.8
1	-35	3.4	3.9	4.1	4.3	4.5	4.0	4.5	4.8	5.0	5.3	4.7	5.4	5.7	6.0	6.3	6.5	7.4	7.8	8.2	8.7	8.7	9.9	10.4	11.0	11.5
1	-30	3.2	3.7	3.8	4.1	4.3	3.7	4.3	4.5	4.8	5.0	4.5	5.2	5.4	5.7	6.0	6.2	7.1	7.5	7.9	8.3	8.4	9.6	10.1	10.6	11.2
0	-25	2.9	3.3	3.5	3.7	3.9	3.4	4.0	4.2	4.4	4.6	4.2	4.8	5.0	5.3	5.6	5.9	6.7	7.1	7.4	7.8	8.0	9.2	9.6	10.1	10.7
0	-20	2.4	2.8	3.0	3.1	3.3	3.0	3.4	3.6	3.8	4.0	3.7	4.3	4.5	4.7	5.0	5.3	6.1	6.4	6.8	7.1	7.4	8.5	8.9	9.4	9.9
0	-15	2.0	2.3	2.5	2.6	2.8	2.5	2.9	3.1	3.3	3.4	3.2	3.7	3.9	4.1	4.3	4.8	5.5	5.8	6.1	6.4	6.8	7.8	8.2	8.6	9.1
	-10	1.6	1.8	2.0	2.1	2.2	2.1	2.4	2.5	2.7	2.8	2.8	3.2	3.3	3.5	3.7	4.3	4.9	5.2	5.4	5.7	6.2	7.1	7.4	7.8	8.3
	-5	1.1	1.3	1.4	1.5	1.6	1.6	1.9	2.0	2.1	2.2	2.2	2.6	2.7	2.9	3.1	3.7	4.3	4.5	4.7	5.0	5.5	6.4	6.7	7.0	7.4
	0	.6	.8	.9	.9	1.0	1.1	1.3	1.4	1.5	1.6	1.7	2.0	2.2	2.3	2.4	3.2	3.7	3.9	4.1	4.3	4.9	5.7	6.0	6.3	6.6
	5	.2	.3	.4	.4	.5	.7	.8	.9	1.0	1.1	1.3	1.5	1.6	1.7	1.8	2.7	3.1	3.3	3.5	3.6	4.4	5.0	5.3	5.6	5.9
	10	-.2	-.1	-.1	-.1	.0	.3	.4	.4	.5	.5	.9	1.0	1.1	1.2	1.3	2.2	2.6	2.7	2.9	3.0	3.8	4.4	4.7	4.9	5.2
	15	-.6	-.6	-.6	-.6	-.6	-.2	-.1	-.1	.0	.0	.4	.5	.6	.6	.7	1.7	2.0	2.1	2.2	2.4	3.3	3.8	4.0	4.2	4.5
	20	-1.1	-1.1	-1.1	-1.1	-1.1	-.7	-.6	-.6	-.6	-.6	-.1	.0	.0	.0	.1	1.1	1.4	1.5	1.6	1.7	2.7	3.1	3.3	3.5	3.7
	25	-1.5	-1.6	-1.6	-1.7	-1.7	-1.1	-1.2	-1.2	-1.2	-1.2	-.6	-.6	-.6	-.6	-.6	.6	.7	.8	.9	1.0	2.1	2.4	2.5	2.7	2.9
	30	-2.1	-2.3	-2.3	-2.4	-2.5	-1.8	-1.9	-1.9	-1.9	-2.0	-1.3	-1.3	-1.3	-1.4	-1.4	-.1	-.1	.0	.0	.0	1.3	1.5	1.6	1.7	1.8
	31	-2.3	-2.5	-2.6	-2.6	-2.7	-2.0	-2.1	-2.1	-2.2	-2.3	-1.5	-1.6	-1.6	-1.6	-1.6	-.4	-.3	-.3	-.3	-.3	1.0	1.2	1.3	1.4	1.5

Figure 4-36 (Sheet 6)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - OFF; LANDING GEAR - DOWN; AIRSPEED - V2; SPEEDBRAKES - RETRACT; INOPERATIVE ENGINE - WINDMILLING; OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.6	2.7	2.9	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.2	3.3	3.5
2	-30	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.4	2.5	2.6	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.3
0	-25	1.2	1.4	1.5	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.6	1.8	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5	2.1	2.4	2.5	2.7	2.8
0	-20	.7	.9	1.0	1.1	1.1	.9	1.1	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	2.0	1.6	1.9	2.0	2.1	2.3
0	-15	.4	.5	.5	.6	.7	.6	.7	.8	.8	.9	.8	.9	1.0	1.1	1.2	1.0	1.2	1.3	1.4	1.4	1.2	1.5	1.5	1.6	1.7
	-10	.0	.1	.1	.1	.2	.1	.2	.3	.3	.4	.4	.5	.5	.6	.6	.6	.7	.8	.8	.9	.8	1.0	1.0	1.1	1.2
	-5	-.4	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.2	-.2	-.1	.0	.0	.1	.1	.1	.2	.3	.3	.4	.3	.5	.5	.6	.6
	0	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.4	-.4	-.4	-.3	-.2	-.2	-.2	-.2	-.1	.0	.0	.1	.1
	5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.6	-.5	-.4	-.4	-.4	-.4
	10	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.6	-1.2	-1.3	-1.3	-1.3	-1.4	-1.1	-1.1	-1.1	-1.1	-1.1	-.9	-.9	-.9	-.9	-.9
	15	-2.0	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-2.0	-2.0	-2.1	-1.6	-1.7	-1.8	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.3	-1.3	-1.4	-1.4
	20	-2.4	-2.5	-2.6	-2.6	-2.7	-2.2	-2.4	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.8	-1.9
	25	-2.8	-3.0	-3.0	-3.1	-3.2	-2.6	-2.8	-2.9	-3.0	-3.0	-2.5	-2.6	-2.7	-2.8	-2.8	-2.3	-2.4	-2.5	-2.6	-2.6	-2.1	-2.3	-2.3	-2.4	-2.4
	29	-3.3	-3.6	-3.6	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.0	-3.2	-3.3	-3.4	-3.5	-2.9	-3.1	-3.1	-3.2	-3.3	-2.7	-2.9	-3.0	-3.0	-3.1
1	-35	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.5	2.6	2.7	2.9
3	-30	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.4	2.5	2.6
0	-25	.6	.8	.8	.9	1.0	.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.4	1.5	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1
0	-20	.2	.4	.4	.4	.5	.4	.6	.6	.7	.7	.6	.8	.9	.9	1.0	.9	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6
0	-15	-.1	-.1	.0	.0	.0	.1	.1	.2	.2	.3	.3	.4	.4	.5	.5	.5	.6	.7	.7	.8	.7	.9	.9	1.0	1.1
	-10	-.5	-.5	-.5	-.4	-.4	-.3	-.3	-.3	-.2	-.2	-.1	-.1	.0	.0	.0	.1	.2	.2	.2	.3	.3	.4	.5	.5	.6
	-5	-.9	-.9	-.9	-.9	-.9	-.8	-.7	-.7	-.7	-.7	-.6	-.5	-.5	-.5	-.5	-.4	-.3	-.3	-.3	-.3	-.2	-.1	-.1	.0	.0
	0	-1.3	-1.4	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.8	-.6	-.5	-.5	-.5	-.5
	5	-1.7	-1.7	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-.9	-1.0	-1.0	-1.0	-1.0
	10	-2.0	-2.1	-2.2	-2.2	-2.3	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4
	15	-2.4	-2.5	-2.6	-2.7	-2.7	-2.2	-2.4	-2.4	-2.5	-2.6	-2.1	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9
	20	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0	-2.4	-2.6	-2.6	-2.7	-2.8	-2.2	-2.4	-2.5	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4
	25	-3.2	-3.4	-3.5	-3.6	-3.7	-3.1	-3.3	-3.4	-3.5	-3.6	-2.9	-3.1	-3.2	-3.3	-3.4	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0
	27	-3.5	-3.7	-3.8	-3.9	-4.1	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.0	-3.3	-3.3	-3.4	-3.5	-2.9	-3.1	-3.2	-3.2	-3.3
1	-35	.8	.9	1.0	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.3
4	-30	.5	.6	.7	.8	.8	.7	.8	.9	1.0	1.1	.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.4	1.6	1.7	1.8	1.9
0	-25	.1	.2	.3	.3	.3	.3	.4	.5	.5	.6	.5	.7	.7	.8	.8	.7	.9	1.0	1.0	1.1	1.0	1.1	1.2	1.3	1.4
0	-20	-.2	-.2	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.1	.2	.3	.3	.4	.3	.5	.5	.6	.6	.6	.7	.8	.8	.9
0	-15	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.1	-.1	-.1	.0	.1	.1	.1	.2	.2	.3	.3	.4	.4
	-10	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.3	-.3	-.2	-.2	-.1	-.1	-.1
	-5	-1.4	-1.4	-1.5	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.0	-1.0	-1.1	-1.1	-1.1	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.6
	0	-1.7	-1.8	-1.9	-1.9	-1.9	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.0	-1.0	-1.1	-1.1	-1.1
	5	-2.1	-2.2	-2.3	-2.3	-2.4	-1.9	-2.1	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-1.9	-2.0	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.5
	10	-2.4	-2.6	-2.6	-2.7	-2.8	-2.3	-2.4	-2.5	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4	-1.9	-2.0	-2.1	-2.1	-2.2	-1.7	-1.8	-1.9	-1.9	-2.0
	15	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0	-2.4	-2.6	-2.7	-2.7	-2.8	-2.3	-2.4	-2.5	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4
	20	-3.1	-3.3	-3.4	-3.5	-3.6	-2.9	-3.1	-3.2	-3.3	-3.4	-2.8	-3.0	-3.0	-3.1	-3.2	-2.6	-2.8	-2.9	-2.9	-3.0	-2.4	-2.6	-2.7	-2.7	-2.8
	25	-3.6	-3.9	-4.0	-4.1	-4.2	-3.5	-3.8	-3.9	-4.0	-4.1	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.0	-3.3	-3.3	-3.4	-3.5
1	-35	.1	.2	.2	.2	.3	.2	.4	.4	.4	.5	.5	.6	.6	.7	.8	.7	.8	.9	1.0	1.0	.9	1.1	1.1	1.2	1.3
5	-30	-.3	-.2	-.2	-.2	-.1	-.1	.0	.0	.0	.1	.1	.2	.2	.3	.3	.3	.4	.5	.5	.6	.5	.7	.7	.8	.9
5	-25	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.4	-.2	-.2	-.2	-.1	-.1	.0	.0	.1	.1	.1	.2	.3	.3	.4	.4
0	-20	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.3	-.3	-.3	-.2	-.1	-.1	-.1	-.1
0	-15	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-.8	-.8	-.8	-.8	-.7	-.6	-.5	-.5	-.5	-.5
	-10	-1.6	-1.7	-1.8	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-.9	-.9	-.9	-1.0	-1.0
	-5	-2.0	-2.1	-2.2	-2.2	-2.3	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4
	0	-2.4	-2.5	-2.6	-2.6	-2.7	-2.2	-2.4	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9
	5	-2.7	-2.9	-3.0	-3.0	-3.1	-2.6	-2.7	-2.8	-2.9	-2.9	-2.4	-2.6	-2.6	-2.7	-2.8	-2.2	-2.4	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.3
	10	-3.0	-3.2	-3.3	-3.4	-3.5	-2.9	-3.1	-3.2	-3.2	-3.3	-2.7	-2.9	-3.0	-3.1	-3.1	-2.5	-2.7	-2.8	-2.9	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7
	15	-3.3	-3.6	-3.7	-3.7	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.0	-3.2	-3.3	-3.4	-3.5	-2.9	-3.1	-3.2	-3.2	-3.3	-2.7	-2.9	-3.0	-3.0	-3.1
	20	-3.7	-4.0	-4.1	-4.2	-4.3	-3.6	-3.8	-3.9	-4.0	-4.1	-3.4	-3.7	-3.8	-3.9	-4.0	-3.3	-3.5	-3.6	-3.7	-3.8	-3.1	-3.3	-3.4	-3.5	-3.6
	21	-3.8	-4.1	-4.3	-4.4	-4.5	-3.7	-4.0	-4.1	-4.2	-4.4	-3.6	-3.9	-4.0	-4.1	-4.2	-3.4	-3.7	-3.8	-3.9	-4.0	-3.3	-3.5	-3.6	-3.7	-3.8

Figure 4-36 (Sheet 7)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - OFF
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		11400					11000					10500					9500					8500					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
1	-35	2.9	3.3	3.5	3.7	3.9	3.4	3.9	4.1	4.3	4.6	4.2	4.8	5.0	5.3	5.6	5.9	6.7	7.1	7.4	7.8	8.0	9.1	9.6	10.1	10.6	
2	-30	2.7	3.1	3.3	3.4	3.6	3.2	3.7	3.9	4.1	4.3	4.0	4.6	4.8	5.0	5.3	5.6	6.5	6.8	7.1	7.5	7.8	8.9	9.3	9.8	10.3	
0	-25	2.3	2.7	2.8	3.0	3.1	2.8	3.3	3.4	3.6	3.8	3.6	4.1	4.3	4.5	4.8	5.2	6.0	6.3	6.6	6.9	7.2	8.3	8.7	9.1	9.6	
0	-20	1.9	2.2	2.3	2.4	2.6	2.4	2.8	2.9	3.1	3.2	3.1	3.6	3.7	3.9	4.2	4.7	5.4	5.6	5.9	6.2	6.6	7.6	8.0	8.4	8.9	
0	-15	1.5	1.7	1.8	1.9	2.0	2.0	2.3	2.4	2.5	2.7	2.6	3.1	3.2	3.4	3.6	4.2	4.8	5.0	5.3	5.6	6.0	6.9	7.3	7.7	8.1	
	-10	1.0	1.2	1.3	1.4	1.5	1.5	1.8	1.9	2.0	2.1	2.2	2.5	2.7	2.8	3.0	3.7	4.2	4.4	4.7	4.9	5.5	6.3	6.6	6.9	7.3	
	-5	.6	.7	.8	.9	.9	1.0	1.3	1.3	1.4	1.5	1.7	2.0	2.1	2.2	2.3	3.1	3.6	3.8	4.0	4.2	4.9	5.6	5.9	6.2	6.5	
	0	.1	.2	.3	.3	.4	.6	.8	.8	.9	.9	1.2	1.4	1.5	1.6	1.7	2.6	3.0	3.2	3.3	3.5	4.3	4.9	5.2	5.5	5.8	
	5	-.3	-.2	-.2	-.2	-.1	.2	.3	.3	.4	.4	.8	1.0	1.0	1.1	1.2	2.1	2.5	2.6	2.8	2.9	3.8	4.3	4.6	4.8	5.1	
	10	-.7	-.6	-.6	-.6	-.6	-.2	-.2	-.1	-.1	-.1	.3	.5	.5	.6	.6	1.6	1.9	2.0	2.2	2.3	3.2	3.7	3.9	4.2	4.4	
	15	-1.1	-1.1	-1.1	-1.1	-1.1	-.7	-.6	-.6	-.6	-.6	-.1	.0	.0	.0	.1	1.1	1.4	1.5	1.6	1.7	2.7	3.1	3.3	3.5	3.7	
	20	-1.5	-1.6	-1.6	-1.6	-1.7	-1.1	-1.1	-1.1	-1.2	-1.2	-.6	-.5	-.5	-.5	-.5	.6	.8	.9	.9	1.0	2.1	2.5	2.6	2.8	2.9	
	25	-1.9	-2.1	-2.1	-2.2	-2.2	-1.6	-1.6	-1.7	-1.7	-1.7	-1.0	-1.1	-1.1	-1.1	-1.1	.1	.2	.3	.3	.4	1.5	1.8	1.9	2.0	2.2	
	29	-2.5	-2.7	-2.8	-2.8	-2.9	-2.2	-2.3	-2.4	-2.4	-2.5	-1.7	-1.8	-1.8	-1.8	-1.9	-.6	-.5	-.5	-.5	-.5	.8	.9	1.0	1.1	1.2	
1	-35	2.4	2.7	2.9	3.0	3.2	2.9	3.3	3.5	3.7	3.9	3.6	4.2	4.4	4.6	4.8	5.3	6.1	6.4	6.7	7.1	7.4	8.4	8.8	9.3	9.8	
3	-30	2.2	2.5	2.6	2.8	2.9	2.7	3.1	3.3	3.4	3.6	3.4	3.9	4.1	4.3	4.6	5.1	5.8	6.1	6.4	6.7	7.1	8.1	8.5	8.9	9.4	
0	-25	1.7	2.0	2.1	2.3	2.4	2.3	2.6	2.8	2.9	3.1	3.0	3.4	3.6	3.8	4.0	4.5	5.2	5.5	5.8	6.1	6.5	7.4	7.8	8.2	8.6	
0	-20	1.3	1.6	1.7	1.8	1.9	1.8	2.1	2.2	2.4	2.5	2.5	2.9	3.0	3.2	3.4	4.0	4.6	4.9	5.1	5.4	5.9	6.8	7.1	7.5	7.9	
0	-15	.9	1.1	1.2	1.3	1.4	1.4	1.7	1.8	1.9	2.0	2.1	2.4	2.5	2.7	2.8	3.6	4.1	4.3	4.5	4.8	5.3	6.1	6.4	6.8	7.2	
	-10	.5	.7	.7	.8	.8	1.0	1.2	1.3	1.3	1.4	1.6	1.9	2.0	2.1	2.3	3.1	3.5	3.7	3.9	4.1	4.8	5.5	5.8	6.1	6.4	
	-5	.1	.2	.2	.2	.3	.5	.7	.7	.8	.8	1.1	1.4	1.4	1.5	1.6	2.5	2.9	3.1	3.3	3.4	4.2	4.8	5.1	5.4	5.7	
	0	-.4	-.3	-.3	-.3	-.2	.1	.2	.2	.3	.3	.7	.8	.9	1.0	1.1	2.0	2.4	2.5	2.6	2.8	3.7	4.2	4.4	4.7	4.9	
	5	-.7	-.7	-.7	-.7	-.7	-.3	-.3	-.2	-.2	-.2	.3	.4	.4	.5	.5	1.6	1.9	2.0	2.1	2.2	3.1	3.6	3.8	4.0	4.3	
	10	-1.1	-1.2	-1.2	-1.2	-1.2	-.7	-.7	-.7	-.7	-.7	-.2	-.1	-.1	.0	.0	1.1	1.3	1.4	1.5	1.6	2.6	3.1	3.2	3.4	3.6	
	15	-1.5	-1.6	-1.6	-1.6	-1.7	-1.1	-1.1	-1.2	-1.2	-1.2	-.6	-.5	-.5	-.5	-.5	.6	.8	.9	1.0	1.0	2.1	2.5	2.6	2.8	2.9	
	20	-1.9	-2.0	-2.1	-2.1	-2.1	-1.5	-1.6	-1.6	-1.6	-1.7	-1.0	-1.0	-1.0	-1.0	-1.0	.2	.3	.3	.4	.4	1.6	1.9	2.0	2.1	2.3	
	25	-2.4	-2.6	-2.6	-2.7	-2.8	-2.0	-2.2	-2.2	-2.3	-2.3	-1.5	-1.6	-1.7	-1.7	-1.7	-.4	-.4	-.4	-.4	-.3	.9	1.1	1.2	1.3	1.4	
	27	-2.7	-2.9	-3.0	-3.1	-3.1	-2.3	-2.5	-2.6	-2.6	-2.7	-1.9	-2.0	-2.0	-2.1	-2.1	-.8	-.8	-.8	-.8	-.8	.5	.7	.8	.8	.9	
1	-35	1.9	2.2	2.3	2.4	2.6	2.4	2.8	2.9	3.1	3.3	3.1	3.6	3.8	3.9	4.2	4.7	5.4	5.7	6.0	6.3	6.7	7.7	8.1	8.5	8.9	
4	-30	1.6	1.9	2.0	2.1	2.2	2.1	2.4	2.6	2.7	2.9	2.8	3.2	3.4	3.6	3.8	4.4	5.0	5.3	5.5	5.8	6.3	7.2	7.6	8.0	8.4	
0	-25	1.2	1.4	1.5	1.6	1.7	1.7	2.0	2.1	2.2	2.3	2.4	2.7	2.9	3.0	3.2	3.9	4.5	4.7	4.9	5.2	5.7	6.6	6.9	7.3	7.7	
0	-20	.8	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	2.2	2.4	2.5	2.6	3.4	3.9	4.1	4.3	4.6	5.2	6.0	6.3	6.6	6.9	
0	-15	.4	.5	.6	.6	.7	.9	1.1	1.1	1.2	1.3	1.5	1.8	1.9	2.0	2.1	3.0	3.4	3.6	3.8	4.0	4.7	5.4	5.6	5.9	6.3	
	-10	.0	.1	.1	.2	.2	.4	.6	.6	.7	.8	1.1	1.3	1.4	1.4	1.5	2.5	2.9	3.0	3.2	3.4	4.1	4.8	5.0	5.3	5.6	
	-5	-.4	-.4	-.4	-.4	-.3	.0	.1	.1	.2	.2	.6	.8	.8	.9	1.0	2.0	2.3	2.4	2.6	2.7	3.6	4.1	4.3	4.6	4.8	
	0	-.8	-.8	-.8	-.8	-.8	-.4	-.4	-.3	-.3	-.3	.2	.3	.3	.4	.4	1.5	1.8	1.9	2.0	2.1	3.1	3.5	3.7	3.9	4.1	
	5	-1.2	-1.2	-1.3	-1.3	-1.3	-.8	-.8	-.8	-.8	-.8	-.2	-.2	-.2	-.1	-.1	1.0	1.3	1.3	1.4	1.5	2.6	3.0	3.1	3.3	3.5	
	10	-1.6	-1.6	-1.7	-1.7	-1.7	-1.2	-1.2	-1.2	-1.2	-1.3	-.6	-.6	-.6	-.6	-.6	.6	.8	.8	.9	1.0	2.1	2.4	2.6	2.7	2.9	
	15	-1.9	-2.0	-2.1	-2.1	-2.2	-1.5	-1.6	-1.6	-1.7	-1.7	-1.0	-1.0	-1.0	-1.0	-1.1	.2	.3	.3	.4	.4	1.6	1.9	2.0	2.1	2.3	
	20	-2.3	-2.4	-2.5	-2.5	-2.6	-1.9	-2.0	-2.0	-2.1	-2.1	-1.4	-1.4	-1.5	-1.5	-1.5	-.2	-.2	-.1	-.1	-.1	1.1	1.4	1.5	1.6	1.7	
	25	-2.9	-3.1	-3.2	-3.2	-3.3	-2.5	-2.7	-2.8	-2.8	-2.9	-2.0	-2.2	-2.2	-2.3	-2.3	-1.0	-1.0	-1.0	-1.0	-1.0	.3	.5	.5	.6	.6	
1	-35	1.1	1.3	1.4	1.5	1.6	1.6	1.9	2.0	2.1	2.2	2.3	2.6	2.8	2.9	3.1	3.8	4.4	4.6	4.8	5.1	5.7	6.5	6.8	7.2	7.6	
5	-30	.8	.9	1.0	1.1	1.1	1.2	1.5	1.6	1.6	1.7	1.9	2.2	2.3	2.4	2.6	3.4	3.9	4.1	4.3	4.5	5.2	5.9	6.2	6.6	6.9	
5	-25	.4	.5	.6	.6	.7	.9	1.0	1.1	1.2	1.3	1.5	1.7	1.8	2.0	2.1	2.9	3.4	3.6	3.7	3.9	4.7	5.4	5.7	6.0	6.3	
0	-20	.0	.1	.1	.2	.2	.5	.6	.7	.7	.8	1.1	1.3	1.4	1.5	1.5	2.5	2.9	3.0	3.2	3.4	4.2	4.8	5.1	5.3	5.6	
0	-15	-.4	-.3	-.3	-.3	-.2	.1	.2	.2	.3	.3	.7	.8	.9	1.0	1.0	2.1	2.4	2.5	2.7	2.8	3.7	4.3	4.5	4.7	5.0	
	-10	-.7	-.7	-.7	-.7	-.7	-.3	-.3	-.2	-.2	-.2	.3	.4	.4	.5	.5	1.6	1.9	2.0	2.1	2.2	3.2	3.7	3.9	4.1	4.3	
	-5	-1.1	-1.2	-1.2	-1.2	-1.2	-.7	-.7	-.7	-.7	-.7	-.2	-.1	-.1	.0	.0	1.1	1.3	1.4	1.5	1.6	2.7	3.1	3.3	3.4	3.6	
	0	-1.5	-1.6	-1.6	-1.6	-1.7	-1.1	-1.1	-1.1	-1.2	-1.2	-.6	-.5	-.5	-.5	-.5	.7	.8	.9	1.0	1.1	2.2	2.5	2.7	2.8	3.0	
	5	-1.9	-2.0	-2.0	-2.1	-2.1	-1.5	-1.6	-1.6	-1.6	-1.6	-1.0	-1.0	-1.0	-1.0	-1.0	.2	.4	.4	.5	.5	1.7	2.0	2.1	2.2	2.4	
	10	-2.2	-2.3	-2.4	-2.5	-2.5	-1.8	-1.9	-2.0	-2.0	-2.1	-1.3	-1.4	-1.4	-1.4	-1.4	-.2	-.1	-.1	.0	.0	1.3	1.5	1.6	1.7	1.8	
	15	-2.5	-2.7	-2.8	-2.8	-2.9	-2.2	-2.3	-2.4	-2.4	-2.5	-1.7	-1.8	-1.8	-1.8	-1.9	-.6	-.5	-.5	-.5	-.5	.8	1.0	1.1	1.1	1.2	
	20	-2.9	-3.1	-3.2	-3.3	-3.4	-2.6	-2.8	-2.8	-2.9	-3.0	-2.1	-2.3	-2.3	-2.4	-2.4	-1.0	-1.1	-1.1	-1.1	-1.1	.3	.4	.4	.5	.6	
	21	-3.1	-3.3	-3.4	-3.5	-3.6	-2.8	-3.0	-3.1	-3.1	-3.2	-2.3	-2.5	-2.5	-2.6	-2.7	-1.3	-1.3	-1.3	-1.3	-1.4	.0	.1	.2	.2	.2	

[redacted]

Figure 4-36 (Sheet 8)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - ON
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-35	2.6	3.0	3.2	3.4	3.7	2.8	3.3	3.5	3.7	4.0	3.0	3.6	3.8	4.0	4.3	3.3	3.8	4.1	4.4	4.6	3.5	4.2	4.4	4.7	5.0
	-30	2.6	3.0	3.2	3.4	3.7	2.8	3.3	3.5	3.7	3.9	3.0	3.5	3.8	4.0	4.3	3.3	3.8	4.1	4.3	4.6	3.5	4.1	4.4	4.7	5.0
	-25	2.6	3.0	3.2	3.4	3.7	2.8	3.3	3.5	3.7	3.9	3.0	3.5	3.8	4.0	4.3	3.3	3.8	4.1	4.3	4.6	3.5	4.1	4.4	4.7	5.0
	-20	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.5	3.7	3.9	3.0	3.6	3.8	4.0	4.3	3.3	3.8	4.1	4.3	4.6	3.5	4.1	4.4	4.7	5.0
	-15	2.6	3.0	3.2	3.4	3.7	2.8	3.3	3.5	3.7	3.9	3.0	3.6	3.8	4.0	4.3	3.3	3.9	4.1	4.3	4.6	3.5	4.2	4.4	4.7	5.0
	-10	2.6	3.0	3.2	3.4	3.7	2.8	3.3	3.5	3.7	3.9	3.0	3.6	3.8	4.0	4.3	3.3	3.9	4.1	4.3	4.6	3.6	4.2	4.4	4.7	5.0
	-5	2.6	3.1	3.2	3.4	3.7	2.8	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.3	3.3	3.9	4.1	4.3	4.6	3.6	4.2	4.4	4.7	5.0
	0	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.6	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.4	4.0	4.3	4.5	4.8
	5	2.4	2.8	3.0	3.1	3.3	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.3	3.3	3.9	4.1	4.4	4.6
	10	1.4	1.7	1.8	2.0	2.1	1.6	1.9	2.1	2.2	2.4	1.8	2.2	2.3	2.5	2.7	2.1	2.5	2.6	2.8	3.0	2.3	2.7	2.9	3.1	3.3
1	-35	2.5	2.9	3.1	3.3	3.5	2.7	3.1	3.3	3.6	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.5	3.4	4.0	4.3	4.5	4.8
0	-30	2.4	2.9	3.1	3.3	3.5	2.7	3.1	3.3	3.5	3.8	2.9	3.4	3.6	3.9	4.1	3.1	3.7	3.9	4.2	4.5	3.4	4.0	4.3	4.5	4.8
0	-25	2.5	2.9	3.1	3.3	3.5	2.7	3.1	3.3	3.5	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.4	4.0	4.2	4.5	4.8
0	-20	2.5	2.9	3.1	3.3	3.5	2.7	3.1	3.3	3.5	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.4	4.0	4.2	4.5	4.8
	-15	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.4	4.0	4.3	4.5	4.8
	-10	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.4	3.6	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	4.0	4.2	4.5	3.5	4.0	4.3	4.5	4.8
	-5	2.4	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.1	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.5	4.7
	0	2.3	2.7	2.9	3.1	3.3	2.5	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.9	3.0	3.5	3.7	4.0	4.2	3.3	3.8	4.0	4.3	4.6
	5	1.9	2.2	2.4	2.5	2.7	2.1	2.4	2.6	2.8	2.9	2.3	2.7	2.9	3.1	3.2	2.5	3.0	3.2	3.4	3.6	2.8	3.3	3.5	3.7	3.9
	10	1.0	1.2	1.3	1.4	1.5	1.1	1.4	1.5	1.6	1.7	1.4	1.6	1.8	1.9	2.0	1.6	1.9	2.0	2.2	2.3	1.8	2.2	2.3	2.5	2.6
2	-35	2.4	2.8	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.8	3.4	3.6	3.8	4.0	3.1	3.6	3.9	4.1	4.4	3.4	3.9	4.2	4.4	4.7
0	-30	2.4	2.8	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.8	3.3	3.5	3.8	4.0	3.1	3.6	3.9	4.1	4.4	3.4	3.9	4.2	4.4	4.7
0	-25	2.4	2.8	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.8	3.3	3.5	3.8	4.0	3.1	3.6	3.8	4.1	4.3	3.4	3.9	4.2	4.4	4.7
0	-20	2.4	2.8	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.9	3.4	3.5	3.8	4.0	3.1	3.6	3.9	4.1	4.3	3.4	3.9	4.2	4.4	4.7
	-15	2.4	2.8	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.1	3.7	3.9	4.1	4.3	3.4	3.9	4.2	4.4	4.7
	-10	2.4	2.9	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.1	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.4	4.7
	-5	2.3	2.7	2.9	3.1	3.3	2.5	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.9	3.0	3.5	3.7	3.9	4.2	3.3	3.8	4.0	4.3	4.5
	0	2.2	2.6	2.7	2.9	3.1	2.4	2.8	3.0	3.1	3.3	2.6	3.1	3.2	3.4	3.6	2.9	3.4	3.5	3.8	4.0	3.1	3.6	3.9	4.1	4.3
	5	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.3	1.8	2.1	2.3	2.4	2.6	2.0	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2
	10	.5	.7	.7	.8	.9	.7	.9	.9	1.0	1.1	.9	1.1	1.2	1.3	1.4	1.1	1.4	1.5	1.6	1.7	1.3	1.6	1.7	1.8	2.0
3	-35	2.4	2.9	3.1	3.2	3.5	2.6	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.1	3.1	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.5	4.8
0	-30	2.4	2.9	3.1	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.1	3.1	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.5	4.7
0	-25	2.4	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.1	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.5	4.7
0	-20	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.5	4.7
	-15	2.5	2.9	3.1	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.5	4.7
	-10	2.4	2.9	3.0	3.2	3.4	2.6	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.1	3.7	3.9	4.1	4.3	3.4	4.0	4.2	4.4	4.7
	-5	2.2	2.6	2.8	2.9	3.1	2.4	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.1	3.2	3.7	3.9	4.1	4.4
	0	1.9	2.2	2.4	2.5	2.7	2.1	2.5	2.6	2.8	2.9	2.3	2.7	2.9	3.1	3.2	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.5	3.7	3.9
	5	.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.1	2.2	1.8	2.1	2.2	2.4	2.5
	10	.1	.2	.2	.2	.3	.2	.4	.4	.5	.5	.4	.6	.6	.7	.8	.6	.8	.9	1.0	1.1	.9	1.1	1.2	1.2	1.3
4	-35	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.4	3.6	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.5	4.0	4.3	4.5	4.8
0	-30	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.8	2.9	3.4	3.6	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.4	4.0	4.3	4.5	4.8
0	-25	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.8	2.9	3.4	3.6	3.8	4.1	3.2	3.7	3.9	4.2	4.4	3.5	4.0	4.2	4.5	4.8
0	-20	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.1	3.2	3.7	3.9	4.2	4.4	3.5	4.0	4.2	4.5	4.8
	-15	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.1	3.2	3.7	3.9	4.2	4.4	3.5	4.0	4.3	4.5	4.8
	-10	2.4	2.8	2.9	3.1	3.3	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2	3.3	3.9	4.1	4.3	4.6
	-5	2.1	2.5	2.6	2.8	3.0	2.3	2.7	2.9	3.0	3.2	2.6	3.0	3.2	3.3	3.5	2.8	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2
	0	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.3	1.8	2.1	2.3	2.4	2.6	2.0	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2
	5	.4	.6	.7	.7	.8	.6	.8	.9	.9	1.0	.8	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.8	1.9
	10	-.4	-.3	-.3	-.3	-.3	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.2	.2	.2	.3	.4	.4	.5	.4	.6	.6	.7	.8
5	-35	2.5	3.0	3.2	3.3	3.6	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.2	3.3	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.6	4.8
0	-30	2.5	3.0	3.1	3.3	3.5	2.7	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.2	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.6	4.8
0	-25	2.5	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.2	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.5	4.8
0	-20	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.5	4.8
	-15	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.5	4.8
	-10	2.3	2.6	2.8	3.0	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.4
	-5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	3.0	2.4	2.8	3.0	3.1	3.3	2.6	3.1	3.2	3.4	3.6	2.9	3.4	3.5	3.7	4.0
	0	.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.1	2.2	1.8	2.1	2.2	2.3	2.5
	5	.0	.1	.1	.2	.2	.2	.3	.3	.4	.4	.4	.5	.6	.6	.7	.6	.7	.8	.9	1.0	.8	1.0	1.1	1.2	1.2
	10	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.2	-.1	-.1	.0	.1	.1	.1	.2

Figure 4-37 (Sheet 1 of 6)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - ON
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		11400					11000					10500					9500					8500					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
0	-35	3.8	4.5	4.7	5.0	5.4	4.4	5.1	5.4	5.8	6.2	5.1	6.0	6.4	6.8	7.3	6.9	8.1	8.6	9.2	9.8	9.1	10.7	11.4	12.1	12.9	
	-30	3.8	4.5	4.7	5.0	5.4	4.4	5.1	5.4	5.8	6.2	5.1	6.0	6.4	6.8	7.2	6.9	8.1	8.6	9.2	9.8	9.1	10.7	11.3	12.1	12.9	
	-25	3.8	4.5	4.7	5.0	5.4	4.4	5.1	5.4	5.8	6.1	5.1	6.0	6.4	6.8	7.2	6.9	8.1	8.6	9.2	9.8	9.1	10.7	11.3	12.0	12.8	
	-20	3.8	4.5	4.7	5.0	5.3	4.4	5.1	5.4	5.8	6.1	5.1	6.0	6.4	6.8	7.2	7.0	8.1	8.6	9.2	9.8	9.2	10.7	11.3	12.0	12.8	
	-15	3.8	4.5	4.7	5.0	5.3	4.4	5.1	5.4	5.8	6.1	5.2	6.0	6.4	6.8	7.2	7.0	8.2	8.6	9.2	9.8	9.2	10.7	11.3	12.0	12.8	
	-10	3.8	4.5	4.7	5.0	5.3	4.4	5.1	5.4	5.8	6.1	5.2	6.0	6.4	6.8	7.2	7.0	8.2	8.6	9.2	9.7	9.2	10.7	11.4	12.0	12.8	
	-5	3.8	4.5	4.8	5.0	5.4	4.4	5.2	5.5	5.8	6.1	5.2	6.1	6.4	6.8	7.2	7.0	8.2	8.6	9.2	9.7	9.2	10.7	11.4	12.0	12.8	
	0	3.7	4.3	4.6	4.9	5.2	4.3	5.0	5.3	5.6	6.0	5.1	5.9	6.2	6.6	7.0	6.9	8.0	8.5	9.0	9.5	9.1	10.6	11.1	11.8	12.6	
	5	3.6	4.2	4.4	4.7	5.0	4.2	4.8	5.1	5.4	5.8	4.9	5.7	6.1	6.4	6.8	6.7	7.8	8.3	8.8	9.3	8.9	10.4	10.9	11.6	12.3	
	10	2.6	3.0	3.2	3.4	3.6	3.1	3.6	3.9	4.1	4.4	3.8	4.5	4.7	5.0	5.3	5.5	6.4	6.8	7.2	7.7	7.6	8.8	9.3	9.9	10.5	
1	-35	3.7	4.3	4.6	4.9	5.2	4.2	5.0	5.3	5.6	6.0	5.0	5.9	6.2	6.6	7.1	6.8	8.0	8.5	9.0	9.6	9.0	10.5	11.2	11.9	12.7	
0	-30	3.7	4.3	4.6	4.9	5.2	4.2	5.0	5.3	5.6	6.0	5.0	5.9	6.2	6.6	7.0	6.8	8.0	8.4	9.0	9.6	9.0	10.5	11.1	11.8	12.6	
0	-25	3.7	4.3	4.6	4.9	5.2	4.2	5.0	5.3	5.6	6.0	5.0	5.9	6.2	6.6	7.0	6.8	8.0	8.4	9.0	9.5	9.0	10.5	11.1	11.8	12.6	
0	-20	3.7	4.3	4.6	4.9	5.2	4.3	5.0	5.3	5.6	6.0	5.0	5.9	6.2	6.6	7.0	6.8	8.0	8.4	9.0	9.5	9.0	10.5	11.1	11.8	12.6	
	-15	3.7	4.3	4.6	4.9	5.2	4.3	5.0	5.3	5.6	6.0	5.0	5.9	6.2	6.6	7.0	6.8	8.0	8.4	9.0	9.5	9.1	10.5	11.1	11.8	12.6	
	-10	3.7	4.3	4.6	4.9	5.2	4.3	5.0	5.3	5.6	6.0	5.1	5.9	6.2	6.6	7.0	6.9	8.0	8.5	9.0	9.5	9.1	10.6	11.2	11.8	12.6	
	-5	3.7	4.3	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.9	5.0	5.8	6.2	6.5	6.9	6.8	7.9	8.4	8.9	9.4	9.0	10.5	11.1	11.7	12.5	
	0	3.5	4.1	4.4	4.6	4.9	4.1	4.8	5.1	5.4	5.7	4.9	5.7	6.0	6.3	6.7	6.7	7.7	8.2	8.7	9.2	8.8	10.3	10.8	11.5	12.2	
	5	3.1	3.6	3.8	4.0	4.3	3.6	4.2	4.4	4.7	5.0	4.3	5.1	5.3	5.7	6.0	6.1	7.1	7.5	7.9	8.4	8.2	9.5	10.1	10.7	11.3	
	10	2.1	2.5	2.6	2.8	3.0	2.6	3.0	3.2	3.4	3.6	3.3	3.8	4.1	4.3	4.6	4.9	5.7	6.0	6.4	6.8	6.9	8.0	8.5	9.0	9.6	
2	-35	3.6	4.3	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.9	4.9	5.8	6.1	6.5	6.9	6.7	7.9	8.3	8.9	9.5	8.9	10.4	11.0	11.7	12.5	
0	-30	3.6	4.2	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.9	4.9	5.8	6.1	6.5	6.9	6.7	7.9	8.3	8.8	9.4	8.9	10.4	11.0	11.7	12.5	
0	-25	3.6	4.2	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.8	4.9	5.8	6.1	6.5	6.9	6.7	7.9	8.3	8.8	9.4	8.9	10.4	11.0	11.7	12.4	
0	-20	3.6	4.2	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.8	5.0	5.8	6.1	6.5	6.9	6.8	7.9	8.3	8.8	9.4	9.0	10.4	11.0	11.7	12.4	
	-15	3.6	4.3	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.8	5.0	5.8	6.1	6.5	6.9	6.8	7.9	8.3	8.8	9.4	9.0	10.4	11.0	11.7	12.4	
	-10	3.7	4.3	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.8	5.0	5.8	6.1	6.5	6.9	6.8	7.9	8.3	8.8	9.4	9.0	10.5	11.0	11.7	12.4	
	-5	3.5	4.1	4.4	4.6	4.9	4.1	4.8	5.0	5.3	5.7	4.9	5.7	6.0	6.3	6.7	6.7	7.7	8.2	8.6	9.2	8.9	10.3	10.8	11.5	12.2	
	0	3.4	3.9	4.2	4.4	4.7	3.9	4.6	4.8	5.1	5.4	4.7	5.5	5.8	6.1	6.5	6.5	7.5	7.9	8.4	8.9	8.6	10.0	10.6	11.2	11.9	
	5	2.5	3.0	3.1	3.3	3.6	3.1	3.6	3.8	4.0	4.3	3.8	4.4	4.7	4.9	5.2	5.4	6.3	6.7	7.1	7.5	7.5	8.7	9.2	9.7	10.4	
	10	1.6	1.9	2.0	2.1	2.3	2.1	2.4	2.6	2.8	3.0	2.7	3.2	3.4	3.6	3.9	4.3	5.0	5.3	5.6	6.0	6.2	7.2	7.6	8.1	8.6	
3	-35	3.7	4.3	4.5	4.8	5.1	4.2	5.0	5.2	5.6	5.9	5.0	5.8	6.2	6.6	7.0	6.8	7.9	8.4	8.9	9.5	9.0	10.5	11.1	11.8	12.5	
0	-30	3.7	4.3	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.9	5.0	5.8	6.2	6.5	7.0	6.8	7.9	8.4	8.9	9.4	9.0	10.5	11.1	11.7	12.5	
0	-25	3.7	4.3	4.5	4.8	5.1	4.2	4.9	5.2	5.5	5.9	5.0	5.8	6.2	6.5	6.9	6.8	7.9	8.4	8.9	9.4	9.0	10.5	11.1	11.7	12.4	
0	-20	3.7	4.3	4.5	4.8	5.1	4.3	4.9	5.2	5.5	5.9	5.0	5.8	6.2	6.5	6.9	6.8	7.9	8.4	8.9	9.4	9.0	10.5	11.1	11.7	12.4	
	-15	3.7	4.3	4.5	4.8	5.1	4.3	5.0	5.2	5.5	5.9	5.0	5.8	6.2	6.5	6.9	6.8	7.9	8.4	8.9	9.4	9.0	10.5	11.1	11.7	12.4	
	-10	3.7	4.3	4.5	4.8	5.0	4.2	4.9	5.2	5.5	5.8	5.0	5.8	6.1	6.5	6.9	6.8	7.9	8.3	8.8	9.3	9.0	10.4	11.0	11.6	12.3	
	-5	3.5	4.0	4.2	4.5	4.8	4.0	4.7	4.9	5.2	5.5	4.8	5.5	5.8	6.2	6.5	6.5	7.6	8.0	8.5	9.0	8.7	10.1	10.7	11.3	12.0	
	0	3.1	3.6	3.8	4.0	4.2	3.6	4.2	4.4	4.7	5.0	4.4	5.1	5.3	5.7	6.0	6.1	7.1	7.4	7.9	8.4	8.2	9.5	10.1	10.6	11.3	
	5	2.0	2.4	2.5	2.7	2.8	2.5	3.0	3.1	3.3	3.5	3.2	3.7	4.0	4.2	4.5	4.8	5.6	5.9	6.3	6.6	6.8	7.9	8.3	8.8	9.4	
	10	1.1	1.3	1.4	1.5	1.6	1.6	1.9	2.0	2.1	2.3	2.2	2.6	2.8	2.9	3.1	3.7	4.3	4.6	4.9	5.2	5.5	6.5	6.8	7.3	7.7	
4	-35	3.7	4.3	4.6	4.9	5.2	4.3	5.0	5.3	5.6	5.9	5.0	5.9	6.2	6.6	7.0	6.9	8.0	8.4	8.9	9.5	9.1	10.5	11.1	11.8	12.5	
0	-30	3.7	4.3	4.6	4.8	5.1	4.3	5.0	5.3	5.6	5.9	5.0	5.9	6.2	6.6	7.0	6.9	8.0	8.4	8.9	9.5	9.1	10.5	11.1	11.8	12.5	
0	-25	3.7	4.3	4.6	4.8	5.1	4.3	5.0	5.3	5.6	5.9	5.1	5.9	6.2	6.6	7.0	6.9	8.0	8.4	8.9	9.4	9.1	10.5	11.1	11.7	12.4	
0	-20	3.7	4.3	4.6	4.8	5.1	4.3	5.0	5.3	5.6	5.9	5.1	5.9	6.2	6.6	7.0	6.9	8.0	8.4	8.9	9.4	9.1	10.5	11.1	11.7	12.4	
	-15	3.7	4.3	4.6	4.8	5.1	4.3	5.0	5.3	5.6	5.9	5.1	5.9	6.2	6.6	6.9	6.9	8.0	8.4	8.9	9.4	9.1	10.5	11.1	11.7	12.4	
	-10	3.6	4.2	4.4	4.6	4.9	4.2	4.8	5.1	5.4	5.7	4.9	5.7	6.0	6.3	6.7	6.7	7.8	8.2	8.6	9.2	8.9	10.3	10.8	11.5	12.1	
	-5	3.3	3.9	4.1	4.3	4.6	3.9	4.5	4.7	5.0	5.3	4.6	5.4	5.7	6.0	6.3	6.4	7.4	7.8	8.2	8.7	8.6	9.9	10.4	11.0	11.7	
	0	2.5	3.0	3.1	3.3	3.5	3.1	3.6	3.8	4.0	4.2	3.8	4.4	4.6	4.9	5.2	5.4	6.3	6.7	7.0	7.5	7.5	8.7	9.2	9.7	10.3	
	5	1.5	1.8	1.9	2.0	2.2	2.0	2.4	2.5	2.7	2.8	2.7	3.1	3.3	3.5	3.7	4.2	4.9	5.2	5.5	5.8	6.1	7.1	7.5	8.0	8.5	
	10	.6	.8	.9	1.0	1.0	1.1	1.3	1.4	1.5	1.6	1.7	2.0	2.2	2.3	2.5	3.1	3.7	3.9	4.2	4.4	4.9	5.7	6.1	6.4	6.9	
5	-35	3.8	4.4	4.6	4.9	5.2	4.3	5.1	5.3	5.6	6.0	5.1	5.9	6.3	6.6	7.0	6.9	8.0	8.5	9.0	9.5	9.1	10.6	11.2	11.8	12.6	
0	-30	3.8	4.4	4.6	4.9	5.2	4.3	5.0	5.3	5.6	6.0	5.1	5.9	6.3	6.6	7.0	6.9	8.0	8.5	9.0	9.5	9.1	10.6	11.2	11.8	12.5	
0	-25	3.8	4.4	4.6	4.9	5.2	4.3	5.0	5.3	5.6	6.0	5.1	5.9	6.3	6.6	7.0	6.9	8.0	8.5	8.9	9.5	9.2	10.6	11.2	11.8	12.5	
0	-20	3.8	4.4	4.6	4.9	5.2	4.4	5.0	5.3	5.6	5.9	5.1	5.9	6.3	6.6	7.0	6.9	8.0	8.5	8.9	9.5	9.2	10.6	11.1	11.8	12.5	
	-15	3.8	4.4	4.6	4.9	5.2	4.4	5.0	5.3	5.6	5.9	5.1	5.9	6.3	6.6	7.0	7.0	8.0	8.5	8.9	9.5	9.2	10.6	11.1	11.8	12.5	
	-10	3.5	4.0	4.2	4.5	4.7	4.0	4.7	4.9	5.2	5.5	4.8	5.5	5.8	6.2	6.5	6.6	7.6	8.0	8.4	8.9	8.8	10.1	10.6	11.2	11.9	
	-5	3.2	3.7	3.9	4.1	4.3	3.7	4.3	4.5	4.8	5.0	4.4	5.1	5.4	5.7	6.0	6.2	7.1	7.5	7.9	8.4	8.3	9.6	10.1	10.7	11.3	
	0	2.0	2.4	2.5	2.6	2.8	2.5	2.9	3.1	3.3	3.5	3.2	3.7	3.9	4.2	4.4	4.8	5.6	5.9	6.2	6.6	6.8	7.9	8.3	8.8	9.3	
	5	1.0	1.2	1.3	1.4	1.5	1.5	1.8	1.9	2.0	2.2	2.1	2.5	2.7	2.8	3.0	3.6	4.2	4.5	4.7	5.0	5.4	6.3	6.7	7.1	7.5	
	10	.2	.3	.3	.4	.4	.6	.8	.9	.9	1.0	1.2	1.5	1.6	1.7	1.8	2.6	3.1	3.2	3.4	3.7	4.3	5.0	5.3	5.6	6.0	

Figure 4-37 (Sheet 2)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - ON
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
6	-35	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.4	3.6	3.9	3.0	3.5	3.7	4.0	4.2	3.3	3.8	4.0	4.3	4.5	3.6	4.1	4.4	4.6	4.9
0	-30	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.2	3.3	3.8	4.0	4.3	4.5	3.6	4.1	4.3	4.6	4.9
0	-25	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.2	3.3	3.8	4.0	4.3	4.5	3.6	4.1	4.3	4.6	4.9
0	-20	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.2	3.3	3.8	4.0	4.2	4.5	3.6	4.1	4.3	4.6	4.8
	-15	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.4	4.0	4.2	4.4	4.7
	-10	2.1	2.5	2.6	2.8	2.9	2.3	2.7	2.8	3.0	3.2	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.1	3.5	3.7	3.9	4.2
	-5	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.2	2.4	2.5	2.7	2.1	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.3
	0	.5	.6	.7	.7	.8	.6	.8	.9	.9	1.0	.8	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.8	1.9
	5	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.1	-.1	.0	.0	.1	.1	.1	.2	.3	.3	.4	.3	.5	.5	.6	.7
	10	-1.2	-1.2	-1.3	-1.3	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.6	-.6	-.6	-.5	-.4	-.4	-.4	-.4
7	-35	2.6	3.0	3.2	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.6	4.8
0	-30	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	3.5	4.1	4.3	4.5	4.8
0	-25	2.5	2.9	3.1	3.2	3.4	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.5	4.7
0	-20	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.4	3.6	2.9	3.4	3.6	3.7	4.0	3.2	3.7	3.9	4.1	4.3	3.4	4.0	4.2	4.4	4.6
	-15	2.2	2.6	2.7	2.9	3.0	2.4	2.8	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.6	2.9	3.4	3.5	3.7	3.9	3.2	3.6	3.8	4.1	4.3
	-10	1.9	2.2	2.3	2.5	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.5	2.8	3.3	3.4	3.6	3.8
	-5	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.2	2.3	1.9	2.2	2.3	2.4	2.6
	0	.0	.1	.1	.1	.2	.2	.3	.3	.4	.4	.4	.5	.5	.6	.7	.6	.7	.8	.9	.9	.8	1.0	1.0	1.1	1.2
	5	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.5	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.1	.0	.0	.0	.1
	10	-1.6	-1.7	-1.7	-1.8	-1.8	-1.4	-1.5	-1.5	-1.6	-1.6	-1.3	-1.3	-1.3	-1.4	-1.4	-1.1	-1.1	-1.1	-1.1	-1.2	-.9	-.9	-.9	-.9	-.9
8	-35	2.5	2.9	3.1	3.2	3.4	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.5	4.7
0	-30	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.4	4.0	4.2	4.4	4.7
0	-25	2.4	2.8	3.0	3.1	3.3	2.6	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.3	3.4	3.9	4.1	4.4	4.6
0	-20	2.3	2.7	2.9	3.0	3.2	2.5	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.5
	-15	2.0	2.3	2.4	2.5	2.7	2.2	2.5	2.6	2.8	3.0	2.4	2.8	2.9	3.1	3.3	2.6	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9
	-10	1.5	1.7	1.8	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.5	2.6	2.1	2.5	2.6	2.8	2.9	2.4	2.8	2.9	3.1	3.3
	-5	.5	.7	.7	.8	.8	.7	.9	.9	1.0	1.1	.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9
	0	-.5	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.2	-.2	-.1	.0	.0	.1	.1	.1	.2	.3	.3	.4	.3	.5	.5	.6	.6
	5	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-.9	-1.0	-1.0	-1.0	-1.0	-.8	-.7	-.7	-.7	-.7	-.6	-.5	-.5	-.5	-.5
	10	-2.0	-2.1	-2.2	-2.2	-2.3	-1.8	-2.0	-2.0	-2.0	-2.1	-1.7	-1.8	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4
9	-35	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.1	3.2	3.4	2.8	3.2	3.4	3.5	3.7	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4
0	-30	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2
0	-25	2.0	2.4	2.5	2.6	2.8	2.2	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.2	3.3	3.5	3.7	3.0	3.5	3.6	3.8	4.1
0	-20	1.6	1.9	2.0	2.2	2.3	1.8	2.2	2.3	2.4	2.5	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.6	3.0	3.1	3.3	3.5
	-15	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.5	1.6	1.8	1.4	1.7	1.8	1.9	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.3	2.4	2.5	2.7
	-10	.3	.4	.5	.5	.6	.5	.6	.7	.7	.8	.7	.9	.9	1.0	1.1	.9	1.1	1.2	1.3	1.4	1.1	1.4	1.4	1.5	1.6
	-5	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.2	-.1	-.1	.0	.1	.1	.1	.2	.2	.3	.3	.4	.4
	0	-1.4	-1.5	-1.5	-1.6	-1.6	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.1	-1.2	-1.2	-1.2	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.7
	5	-2.2	-2.3	-2.4	-2.4	-2.5	-2.0	-2.1	-2.2	-2.3	-2.3	-1.8	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7
	10	-2.8	-3.0	-3.1	-3.2	-3.3	-2.7	-2.9	-2.9	-3.0	-3.1	-2.5	-2.7	-2.8	-2.8	-2.9	-2.3	-2.5	-2.6	-2.6	-2.7	-2.1	-2.3	-2.4	-2.4	-2.5
1	-35	2.0	2.4	2.5	2.6	2.8	2.2	2.6	2.7	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0
0	-30	1.8	2.1	2.3	2.4	2.5	2.0	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.1	3.2	3.4	2.8	3.2	3.4	3.6	3.8
0	-25	1.6	1.9	2.0	2.2	2.3	1.8	2.2	2.3	2.4	2.5	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.6	3.0	3.1	3.3	3.5
0	-20	.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5
0	-15	.2	.3	.3	.4	.4	.4	.5	.6	.6	.7	.6	.7	.8	.9	.9	.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.4	1.5
	-10	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.5	-.4	-.4	-.3	-.3	-.3	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.2	.2
	-5	-1.6	-1.7	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.6	-1.7	-1.3	-1.4	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-.9	-.9	-.9	-.9	-1.0
	0	-2.3	-2.5	-2.6	-2.6	-2.7	-2.2	-2.4	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.3	-1.8	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.8	-1.9
	5	-3.0	-3.2	-3.3	-3.4	-3.5	-2.8	-3.1	-3.2	-3.3	-3.4	-2.7	-2.9	-3.0	-3.1	-3.2	-2.5	-2.7	-2.8	-2.9	-3.0	-2.4	-2.5	-2.6	-2.7	-2.7
	10	-3.5	-3.8	-4.0	-4.1	-4.2	-3.4	-3.7	-3.8	-3.9	-4.1	-3.3	-3.5	-3.6	-3.8	-3.9	-3.1	-3.4	-3.5	-3.6	-3.7	-3.0	-3.2	-3.3	-3.4	-3.5
1	-35	1.6	1.8	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.5	2.6	2.8	2.2	2.6	2.7	2.9	3.1	2.5	2.9	3.0	3.2	3.4
1	-30	1.4	1.6	1.7	1.8	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5	2.1	2.4	2.5	2.7	2.8	2.3	2.7	2.8	3.0	3.1
0	-25	1.0	1.3	1.3	1.4	1.5	1.2	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.3	2.4	2.5	2.7
0	-20	.4	.6	.6	.7	.8	.6	.8	.9	.9	1.0	.9	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9
0	-15	-.3	-.2	-.2	-.2	-.1	-.1	.0	.0	.0	.1	.1	.2	.2	.3	.3	.3	.4	.5	.5	.6	.5	.7	.8	.8	.9
	-10	-1.2	-1.2	-1.3	-1.3	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1	-.8	-.9	-.9	-.9	-.9	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.4
	-5	-2.0	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9	-1.5	-1.6	-1.6	-1.7	-1.7	-1.3	-1.4	-1.4	-1.4	-1.5
	0	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0	-2.4	-2.6	-2.7	-2.7	-2.8	-2.2	-2.4	-2.5	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4
	5	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.5	-3.6	-3.7	-3.8	-3.0	-3.3	-3.4	-3.5	-3.6	-2.9	-3.1	-3.2	-3.3	-3.4	-2.7	-2.9	-3.0	-3.1	-3.2
	10	-3.9	-4.2	-4.3	-4.5	-4.6	-3.8	-4.1	-4.2	-4.3	-4.5	-3.6	-3.9	-4.0	-4.2	-4.3	-3.5	-3.8	-3.9	-4.0	-4.1	-3.3	-3.6	-3.7	-3.8	-3.9

Figure 4-37 (Sheet 3)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - ON
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
6	-35	3.8	4.4	4.7	5.0	5.3	4.4	5.1	5.4	5.7	6.0	5.2	6.0	6.3	6.7	7.1	7.0	8.1	8.5	9.0	9.6	9.2	10.6	11.2	11.8	12.5
0	-30	3.8	4.4	4.7	4.9	5.2	4.4	5.1	5.4	5.7	6.0	5.2	6.0	6.3	6.7	7.1	7.0	8.1	8.5	9.0	9.5	9.2	10.6	11.2	11.8	12.5
0	-25	3.8	4.4	4.7	4.9	5.2	4.4	5.1	5.4	5.7	6.0	5.2	6.0	6.3	6.7	7.0	7.0	8.1	8.5	9.0	9.5	9.2	10.6	11.2	11.8	12.5
0	-20	3.8	4.4	4.7	4.9	5.2	4.4	5.1	5.4	5.7	6.0	5.2	6.0	6.3	6.6	7.0	7.0	8.1	8.5	9.0	9.5	9.2	10.6	11.2	11.8	12.4
	-15	3.7	4.3	4.5	4.7	5.0	4.3	4.9	5.2	5.5	5.8	5.0	5.8	6.1	6.4	6.8	6.8	7.9	8.3	8.8	9.3	9.1	10.4	10.9	11.5	12.2
	-10	3.3	3.8	4.0	4.3	4.5	3.9	4.5	4.7	5.0	5.3	4.6	5.3	5.6	5.9	6.3	6.4	7.4	7.7	8.2	8.6	8.6	9.8	10.3	10.9	11.5
	-5	2.6	3.1	3.2	3.4	3.6	3.2	3.7	3.9	4.1	4.3	3.9	4.5	4.7	5.0	5.3	5.5	6.4	6.8	7.1	7.6	7.6	8.8	9.3	9.8	10.4
	0	1.5	1.8	1.9	2.0	2.2	2.0	2.4	2.5	2.7	2.8	2.7	3.1	3.3	3.5	3.7	4.2	4.9	5.2	5.5	5.8	6.1	7.1	7.5	7.9	8.4
	5	.6	.7	.8	.9	.9	1.0	1.2	1.3	1.4	1.5	1.6	1.9	2.1	2.2	2.4	3.1	3.6	3.8	4.0	4.3	4.8	5.6	5.9	6.3	6.7
	10	-.3	-.2	-.2	-.1	-.1	.2	.3	.3	.4	.4	.7	.9	1.0	1.1	1.2	2.1	2.5	2.6	2.8	3.0	3.7	4.4	4.6	4.9	5.2
7	-35	3.8	4.4	4.7	4.9	5.2	4.4	5.1	5.3	5.6	6.0	5.2	6.0	6.3	6.6	7.0	7.0	8.1	8.5	9.0	9.5	9.2	10.6	11.1	11.8	12.4
0	-30	3.8	4.4	4.6	4.9	5.1	4.4	5.0	5.3	5.6	5.9	5.1	5.9	6.2	6.6	7.0	7.0	8.0	8.4	8.9	9.4	9.2	10.5	11.1	11.7	12.4
0	-25	3.7	4.3	4.5	4.8	5.1	4.3	5.0	5.2	5.5	5.8	5.1	5.9	6.2	6.5	6.9	6.9	7.9	8.4	8.8	9.3	9.1	10.5	11.0	11.6	12.3
0	-20	3.7	4.3	4.5	4.7	5.0	4.3	4.9	5.2	5.4	5.8	5.0	5.8	6.1	6.4	6.8	6.8	7.9	8.3	8.7	9.2	9.1	10.4	10.9	11.5	12.1
	-15	3.4	3.9	4.2	4.4	4.6	4.0	4.6	4.8	5.1	5.4	4.7	5.5	5.7	6.0	6.4	6.5	7.5	7.9	8.3	8.8	8.7	10.0	10.5	11.0	11.7
	-10	3.1	3.6	3.8	4.0	4.2	3.6	4.2	4.4	4.6	4.9	4.4	5.0	5.3	5.6	5.9	6.1	7.0	7.4	7.8	8.2	8.2	9.5	10.0	10.5	11.1
	-5	2.1	2.5	2.6	2.8	2.9	2.6	3.0	3.2	3.4	3.6	3.3	3.8	4.0	4.3	4.5	4.9	5.7	6.0	6.3	6.7	6.9	8.0	8.4	8.9	9.4
	0	1.0	1.2	1.3	1.4	1.5	1.5	1.8	1.9	2.0	2.1	2.1	2.5	2.6	2.8	3.0	3.6	4.2	4.4	4.7	5.0	5.4	6.3	6.6	7.0	7.5
	5	.1	.2	.2	.3	.3	.5	.7	.8	.8	.9	1.1	1.4	1.5	1.6	1.7	2.5	3.0	3.1	3.3	3.5	4.2	4.9	5.2	5.5	5.8
	10	-.7	-.7	-.7	-.7	-.7	-.3	-.2	-.2	-.2	-.1	.3	.4	.5	.5	.6	1.6	1.9	2.0	2.1	2.3	3.2	3.7	3.9	4.2	4.4
8	-35	3.7	4.3	4.6	4.8	5.1	4.3	5.0	5.2	5.5	5.9	5.1	5.9	6.2	6.5	6.9	6.9	8.0	8.4	8.8	9.4	9.1	10.5	11.0	11.6	12.3
0	-30	3.7	4.3	4.5	4.8	5.0	4.3	4.9	5.2	5.5	5.8	5.1	5.8	6.1	6.5	6.8	6.9	7.9	8.3	8.8	9.3	9.1	10.4	11.0	11.6	12.2
0	-25	3.7	4.2	4.5	4.7	5.0	4.2	4.9	5.1	5.4	5.7	5.0	5.8	6.1	6.4	6.8	6.8	7.9	8.3	8.7	9.2	9.0	10.4	10.9	11.5	12.1
0	-20	3.6	4.1	4.3	4.6	4.8	4.1	4.8	5.0	5.3	5.6	4.9	5.6	5.9	6.2	6.6	6.7	7.7	8.1	8.5	9.0	8.9	10.2	10.7	11.3	11.9
	-15	3.2	3.6	3.8	4.0	4.3	3.7	4.3	4.5	4.7	5.0	4.4	5.1	5.4	5.7	6.0	6.2	7.1	7.5	7.9	8.3	8.4	9.6	10.1	10.6	11.2
	-10	2.6	3.0	3.2	3.4	3.6	3.2	3.7	3.8	4.1	4.3	3.9	4.5	4.7	5.0	5.2	5.5	6.4	6.7	7.1	7.5	7.6	8.8	9.2	9.7	10.3
	-5	1.6	1.9	2.0	2.1	2.2	2.1	2.4	2.6	2.7	2.9	2.7	3.2	3.4	3.6	3.8	4.3	5.0	5.2	5.5	5.8	6.2	7.2	7.5	8.0	8.4
	0	.5	.7	.8	.8	.9	1.0	1.2	1.3	1.4	1.5	1.6	1.9	2.0	2.2	2.3	3.0	3.5	3.7	4.0	4.2	4.8	5.6	5.9	6.2	6.6
	5	-.4	-.3	-.3	-.3	-.2	.1	.2	.2	.3	.3	.6	.8	.9	1.0	1.1	2.0	2.3	2.5	2.6	2.8	3.6	4.2	4.5	4.7	5.0
	10	-1.1	-1.2	-1.2	-1.2	-1.2	-.7	-.7	-.7	-.7	-.7	-.2	-.1	-.1	.0	.0	1.1	1.3	1.4	1.5	1.6	2.6	3.1	3.2	3.4	3.7
9	-35	3.5	4.1	4.3	4.5	4.8	4.1	4.7	5.0	5.2	5.5	4.9	5.6	5.9	6.2	6.6	6.7	7.7	8.1	8.5	9.0	8.9	10.2	10.7	11.3	11.9
0	-30	3.4	3.9	4.1	4.4	4.6	4.0	4.6	4.8	5.1	5.3	4.7	5.4	5.7	6.0	6.4	6.5	7.5	7.9	8.3	8.7	8.7	10.0	10.5	11.0	11.6
0	-25	3.3	3.8	4.0	4.2	4.4	3.8	4.4	4.6	4.9	5.1	4.6	5.3	5.5	5.8	6.1	6.3	7.3	7.6	8.1	8.5	8.5	9.7	10.2	10.8	11.4
0	-20	2.8	3.3	3.4	3.6	3.8	3.4	3.9	4.1	4.3	4.6	4.1	4.7	5.0	5.2	5.5	5.8	6.7	7.0	7.4	7.8	7.9	9.1	9.5	10.1	10.6
	-15	2.2	2.5	2.7	2.8	3.0	2.7	3.1	3.3	3.5	3.7	3.4	3.9	4.1	4.3	4.6	5.0	5.7	6.0	6.4	6.7	7.0	8.1	8.5	8.9	9.5
	-10	1.4	1.6	1.7	1.8	1.9	1.8	2.2	2.3	2.4	2.6	2.5	2.9	3.1	3.2	3.4	4.0	4.6	4.9	5.2	5.5	5.9	6.8	7.2	7.6	8.0
	-5	.4	.5	.6	.6	.7	.8	1.0	1.1	1.2	1.3	1.4	1.7	1.8	2.0	2.1	2.9	3.3	3.5	3.7	4.0	4.6	5.3	5.6	5.9	6.3
	0	-.5	-.5	-.5	-.5	-.4	-.1	.0	.0	.1	.1	.5	.6	.7	.7	.8	1.8	2.1	2.2	2.4	2.5	3.4	4.0	4.2	4.4	4.7
	5	-1.3	-1.3	-1.4	-1.4	-1.4	-.9	-.9	-.9	-.9	-.9	-.4	-.3	-.3	-.3	-.3	.9	1.1	1.1	1.2	1.3	2.4	2.8	3.0	3.1	3.3
	10	-2.0	-2.1	-2.2	-2.2	-2.3	-1.6	-1.7	-1.7	-1.8	-1.8	-1.1	-1.1	-1.2	-1.2	-1.2	.0	.1	.2	.2	.3	1.5	1.8	1.9	2.0	2.1
1	-35	3.2	3.7	3.9	4.2	4.4	3.8	4.4	4.6	4.9	5.1	4.6	5.3	5.5	5.8	6.1	6.3	7.3	7.6	8.1	8.5	8.5	9.7	10.2	10.8	11.4
0	-30	3.0	3.5	3.7	3.9	4.1	3.6	4.1	4.4	4.6	4.8	4.3	5.0	5.3	5.5	5.8	6.1	7.0	7.3	7.7	8.2	8.2	9.4	9.9	10.4	11.0
0	-25	2.8	3.3	3.5	3.6	3.8	3.4	3.9	4.1	4.3	4.6	4.1	4.7	5.0	5.2	5.5	5.8	6.7	7.0	7.4	7.8	8.0	9.1	9.6	10.1	10.6
0	-20	2.1	2.4	2.5	2.7	2.8	2.6	3.0	3.2	3.3	3.5	3.3	3.8	4.0	4.2	4.4	4.9	5.6	5.9	6.2	6.6	6.9	7.9	8.3	8.8	9.3
0	-15	1.3	1.5	1.6	1.7	1.8	1.8	2.1	2.2	2.3	2.5	2.4	2.8	3.0	3.1	3.3	3.9	4.5	4.8	5.0	5.3	5.8	6.7	7.0	7.4	7.8
	-10	.2	.3	.4	.4	.5	.7	.9	.9	1.0	1.1	1.3	1.5	1.6	1.7	1.9	2.7	3.1	3.3	3.5	3.7	4.4	5.1	5.4	5.7	6.0
	-5	-.7	-.7	-.7	-.7	-.7	-.3	-.2	-.2	-.2	-.2	.3	.4	.4	.5	.5	1.5	1.8	2.0	2.1	2.2	3.1	3.7	3.9	4.1	4.3
	0	-1.5	-1.6	-1.6	-1.6	-1.7	-1.1	-1.1	-1.1	-1.2	-1.2	-.6	-.5	-.5	-.5	-.5	.6	.8	.9	1.0	1.0	2.1	2.5	2.7	2.8	3.0
	5	-2.2	-2.3	-2.4	-2.5	-2.5	-1.8	-1.9	-2.0	-2.0	-2.1	-1.3	-1.4	-1.4	-1.4	-1.5	-.2	-.1	-.1	-.1	.0	1.2	1.5	1.6	1.7	1.8
	10	-2.8	-3.0	-3.1	-3.2	-3.3	-2.4	-2.6	-2.7	-2.8	-2.9	-2.0	-2.1	-2.2	-2.2	-2.3	-.9	-.9	-.9	-.9	-1.0	.4	.5	.6	.7	.7
1	-35	2.8	3.2	3.4	3.5	3.7	3.3	3.8	4.0	4.2	4.5	4.0	4.6	4.9	5.1	5.4	5.7	6.6	6.9	7.3	7.7	7.9	9.0	9.5	10.0	10.5
1	-30	2.6	3.0	3.1	3.3	3.5	3.1	3.6	3.8	4.0	4.2	3.8	4.4	4.6	4.9	5.1	5.5	6.3	6.6	7.0	7.4	7.6	8.7	9.1	9.6	10.1
0	-25	2.2	2.6	2.7	2.8	3.0	2.7	3.2	3.3	3.5	3.7	3.4	4.0	4.2	4.4	4.6	5.1	5.8	6.1	6.4	6.8	7.1	8.1	8.6	9.0	9.5
0	-20	1.5	1.8	1.9	2.0	2.2	2.1	2.4	2.5	2.7	2.8	2.7	3.2	3.3	3.5	3.7	4.3	4.9	5.2	5.5	5.8	6.2	7.1	7.5	7.9	8.4
0	-15	.8	.9	1.0	1.1	1.2	1.2	1.5	1.6	1.7	1.8	1.9	2.2	2.3	2.5	2.6	3.3	3.9	4.1	4.3	4.5	5.1	5.9	6.2	6.6	6.9
	-10	-.2	-.2	-.1	-.1	-.1	.2	.3	.4	.4	.5	.8	1.0	1.1	1.1	1.2	2.1	2.5	2.7	2.8	3.0	3.8	4.4	4.6	4.9	5.2
	-5	-1.1	-1.2	-1.2	-1.2	-1.2	-.7	-.7	-.7	-.7	-.7	-.2	-.1	-.1	.0	.0	1.1	1.3	1.4	1.5	1.6	2.6	3.0	3.2	3.4	3.6
	0	-1.9	-2.0	-2.1	-2.1	-2.2	-1.5	-1.6	-1.6	-1.7	-1.7	-1.0	-1.0	-1.0	-1.0	-1.0	.2	.3	.3	.4	.4	1.6	1.9	2.0	2.2	2.3
	5	-2.5	-2.7	-2.8	-2.9	-3.0	-2.2	-2.3	-2.4	-2.5	-2.5	-1.7	-1.8	-1.9	-1.9	-2.0	-.6	-.6	-.6	-.6	-.6	.7	.9	1.0	1.1	1.2
	10	-3.2	-3.4	-3.5	-3.6	-3.7	-2.8	-3.0	-3.1	-3.2	-3.3	-2.4	-2.5	-2.6	-2.7	-2.8	-1.3	-1.4	-1.4	-1.5	-1.5	-.1	.0	.0	.1	.1

Figure 4-37 (Sheet 4)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - ON
LANDING GEAR - DOWN
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.5	2.6	2.8
2	-30	.9	1.1	1.2	1.3	1.4	1.1	1.4	1.4	1.5	1.6	1.4	1.6	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.3	2.4	2.5
0	-25	.5	.7	.7	.8	.9	.7	.9	1.0	1.0	1.1	.9	1.1	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.9	2.0
0	-20	.0	.1	.2	.2	.3	.2	.3	.4	.4	.5	.4	.6	.6	.7	.7	.6	.8	.9	.9	1.0	.9	1.1	1.1	1.2	1.3
0	-15	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.5	-.5	-.5	-.4	-.3	-.3	-.3	-.3	-.2	-.1	-.1	-.1	.0	.0	.1	.2	.2	.2
	-10	-1.6	-1.7	-1.7	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.1	-1.1	-1.2	-1.2	-.9	-.9	-.9	-.9	-.9
	-5	-2.4	-2.6	-2.7	-2.7	-2.8	-2.3	-2.4	-2.5	-2.6	-2.6	-2.1	-2.2	-2.3	-2.4	-2.4	-1.9	-2.0	-2.1	-2.1	-2.2	-1.7	-1.8	-1.9	-1.9	-2.0
	0	-3.1	-3.3	-3.4	-3.5	-3.6	-2.9	-3.2	-3.3	-3.4	-3.5	-2.8	-3.0	-3.1	-3.2	-3.3	-2.6	-2.8	-2.9	-3.0	-3.1	-2.5	-2.6	-2.7	-2.8	-2.9
	5	-3.7	-4.0	-4.1	-4.2	-4.3	-3.5	-3.8	-3.9	-4.1	-4.2	-3.4	-3.7	-3.8	-3.9	-4.0	-3.2	-3.5	-3.6	-3.7	-3.8	-3.1	-3.3	-3.4	-3.5	-3.6
	10	-4.2	-4.6	-4.7	-4.9	-5.0	-4.1	-4.5	-4.6	-4.7	-4.9	-4.0	-4.3	-4.4	-4.6	-4.7	-3.8	-4.1	-4.3	-4.4	-4.5	-3.7	-4.0	-4.1	-4.2	-4.4
1	-35	.7	.8	.9	1.0	1.0	.8	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.4	1.5	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1
3	-30	.5	.6	.7	.7	.8	.7	.8	.9	1.0	1.0	.9	1.1	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9
0	-25	.1	.2	.2	.2	.3	.2	.4	.4	.5	.5	.5	.6	.7	.7	.8	.7	.8	.9	1.0	1.0	.9	1.1	1.2	1.2	1.3
0	-20	-.4	-.4	-.3	-.3	-.3	-.2	-.2	-.1	-.1	-.1	.0	.1	.1	.1	.2	.2	.3	.3	.4	.4	.4	.5	.6	.6	.7
0	-15	-1.2	-1.2	-1.2	-1.3	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.6	-.4	-.4	-.4	-.4	-.3
	-10	-2.0	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.1	-2.1	-2.2	-1.7	-1.8	-1.9	-1.9	-1.9	-1.5	-1.6	-1.7	-1.7	-1.7	-1.4	-1.4	-1.4	-1.5	-1.5
	-5	-2.8	-3.0	-3.1	-3.2	-3.3	-2.7	-2.9	-3.0	-3.0	-3.1	-2.5	-2.7	-2.8	-2.9	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7	-2.2	-2.3	-2.4	-2.4	-2.5
	0	-3.4	-3.7	-3.8	-3.9	-4.1	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.0	-3.2	-3.3	-3.4	-3.5	-2.8	-3.1	-3.2	-3.2	-3.3
	5	-4.0	-4.3	-4.5	-4.6	-4.7	-3.9	-4.2	-4.3	-4.5	-4.6	-3.7	-4.0	-4.2	-4.3	-4.4	-3.6	-3.9	-4.0	-4.1	-4.3	-3.4	-3.7	-3.8	-3.9	-4.1
	10	-4.5	-4.9	-5.1	-5.2	-5.4	-4.4	-4.8	-5.0	-5.1	-5.3	-4.3	-4.7	-4.8	-5.0	-5.1	-4.2	-4.5	-4.7	-4.8	-5.0	-4.0	-4.4	-4.5	-4.6	-4.8
1	-35	.2	.3	.4	.4	.5	.4	.5	.6	.7	.7	.6	.8	.8	.9	1.0	.8	1.0	1.1	1.2	1.3	1.1	1.3	1.4	1.5	1.6
4	-30	.0	.1	.1	.1	.2	.2	.3	.3	.4	.4	.4	.5	.5	.6	.7	.6	.7	.8	.9	.9	.8	1.0	1.1	1.1	1.2
0	-25	-.4	-.3	-.3	-.3	-.3	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.2	.2	.2	.3	.4	.4	.5	.4	.6	.6	.7	.7
0	-20	-.9	-.9	-.9	-.9	-.9	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.5	-.5	-.4	-.3	-.3	-.2	-.2	-.2	-.1	.0	.0	.0	.1
0	-15	-1.6	-1.7	-1.8	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.1	-1.2	-1.2	-1.2	-.9	-.9	-.9	-.9	-.9
	-10	-2.5	-2.6	-2.7	-2.8	-2.8	-2.3	-2.5	-2.5	-2.6	-2.7	-2.1	-2.3	-2.3	-2.4	-2.5	-2.0	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0
	-5	-3.2	-3.4	-3.5	-3.6	-3.7	-3.1	-3.3	-3.4	-3.5	-3.6	-2.9	-3.1	-3.2	-3.3	-3.4	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0
	0	-3.8	-4.1	-4.2	-4.3	-4.5	-3.7	-4.0	-4.1	-4.2	-4.3	-3.5	-3.8	-3.9	-4.0	-4.2	-3.4	-3.6	-3.7	-3.9	-4.0	-3.2	-3.5	-3.6	-3.7	-3.8
	5	-4.3	-4.7	-4.8	-5.0	-5.1	-4.2	-4.6	-4.7	-4.9	-5.0	-4.1	-4.4	-4.6	-4.7	-4.8	-3.9	-4.3	-4.4	-4.5	-4.7	-3.8	-4.1	-4.2	-4.4	-4.5
	10	-4.8	-5.3	-5.4	-5.6	-5.8	-4.7	-5.1	-5.3	-5.5	-5.6	-4.6	-5.0	-5.1	-5.3	-5.5	-4.5	-4.9	-5.0	-5.2	-5.3	-4.3	-4.7	-4.8	-5.0	-5.2
1	-35	-.5	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.2	-.2	-.1	.0	.0	.1	.1	.1	.2	.3	.3	.4	.3	.5	.5	.6	.6
5	-30	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.6	-.6	-.5	-.4	-.4	-.3	-.3	-.3	-.2	-.1	-.1	-.1	-.1	.0	.1	.1	.2	.2
5	-25	-1.1	-1.1	-1.1	-1.1	-1.2	-.9	-.9	-.9	-1.0	-1.0	-.7	-.7	-.7	-.7	-.7	-.5	-.5	-.5	-.5	-.5	-.3	-.3	-.3	-.2	-.2
0	-20	-1.5	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.0	-1.0	-1.1	-1.1	-1.1	-.8	-.8	-.8	-.8	-.8
0	-15	-2.3	-2.4	-2.5	-2.5	-2.6	-2.1	-2.3	-2.3	-2.4	-2.4	-2.0	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.6	-1.7	-1.7	-1.8	-1.8
	-10	-3.0	-3.3	-3.4	-3.5	-3.6	-2.9	-3.1	-3.2	-3.3	-3.4	-2.8	-3.0	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0	-2.4	-2.6	-2.7	-2.7	-2.8
	-5	-3.7	-4.0	-4.1	-4.3	-4.4	-3.6	-3.9	-4.0	-4.1	-4.2	-3.5	-3.7	-3.8	-3.9	-4.1	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7
	0	-4.3	-4.6	-4.8	-4.9	-5.1	-4.2	-4.5	-4.6	-4.8	-4.9	-4.0	-4.4	-4.5	-4.6	-4.8	-3.9	-4.2	-4.3	-4.5	-4.6	-3.7	-4.1	-4.2	-4.3	-4.4
	5	-4.8	-5.2	-5.4	-5.6	-5.7	-4.7	-5.1	-5.3	-5.4	-5.6	-4.6	-5.0	-5.1	-5.3	-5.5	-4.5	-4.8	-5.0	-5.1	-5.3	-4.3	-4.7	-4.8	-5.0	-5.1
	10	-5.3	-5.7	-5.9	-6.1	-6.3	-5.2	-5.6	-5.8	-6.0	-6.2	-5.1	-5.5	-5.7	-5.8	-6.0	-5.0	-5.4	-5.5	-5.7	-5.9	-4.8	-5.2	-5.4	-5.5	-5.7

Figure 4-37 (Sheet 5)

FIRST SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: ANTI-ICE SYSTEMS - ON
LANDING GEAR - DOWN
AIRSPEED - V2

SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE - WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	2.3	2.6	2.8	2.9	3.1	2.8	3.2	3.4	3.6	3.8	3.5	4.0	4.2	4.5	4.7	5.1	5.9	6.2	6.5	6.9	7.2	8.3	8.7	9.1	9.6
2	-30	2.1	2.4	2.6	2.7	2.9	2.6	3.0	3.2	3.3	3.5	3.3	3.8	4.0	4.2	4.5	4.9	5.7	6.0	6.3	6.6	7.0	8.0	8.4	8.8	9.3
0	-25	1.6	1.9	2.0	2.1	2.3	2.1	2.5	2.6	2.8	2.9	2.8	3.3	3.4	3.6	3.8	4.4	5.1	5.3	5.6	5.9	6.3	7.3	7.7	8.1	8.5
0	-20	1.1	1.3	1.4	1.5	1.6	1.6	1.9	2.0	2.1	2.2	2.3	2.6	2.8	2.9	3.1	3.8	4.3	4.6	4.8	5.1	5.6	6.4	6.8	7.1	7.5
0	-15	.2	.4	.4	.5	.5	.7	.9	.9	1.0	1.1	1.3	1.6	1.7	1.8	1.9	2.7	3.2	3.3	3.5	3.7	4.5	5.1	5.4	5.7	6.0
	-10	-.7	-.7	-.7	-.7	-.7	-.3	-.2	-.2	-.2	-.1	.3	.4	.5	.5	.6	1.6	1.9	2.0	2.1	2.3	3.2	3.7	3.9	4.1	4.4
	-5	-1.6	-1.6	-1.7	-1.7	-1.7	-1.2	-1.2	-1.2	-1.2	-1.3	-.6	-.6	-.6	-.6	-.6	.6	.7	.8	.9	1.0	2.0	2.4	2.6	2.7	2.9
	0	-2.3	-2.4	-2.5	-2.6	-2.7	-1.9	-2.0	-2.1	-2.1	-2.2	-1.4	-1.5	-1.5	-1.5	-1.6	-.3	-.2	-.2	-.2	-.2	1.1	1.3	1.4	1.5	1.6
	5	-2.9	-3.1	-3.2	-3.3	-3.4	-2.6	-2.8	-2.8	-2.9	-3.0	-2.1	-2.2	-2.3	-2.4	-2.4	-1.0	-1.1	-1.1	-1.1	-1.1	.2	.4	.4	.5	.5
	10	-3.5	-3.8	-3.9	-4.0	-4.2	-3.2	-3.5	-3.6	-3.7	-3.8	-2.8	-3.0	-3.1	-3.2	-3.3	-1.8	-1.9	-1.9	-2.0	-2.0	-.6	-.5	-.5	-.5	-.5
1	-35	1.8	2.1	2.2	2.3	2.4	2.3	2.6	2.8	2.9	3.1	3.0	3.4	3.6	3.8	4.0	4.6	5.3	5.5	5.8	6.1	6.5	7.5	7.9	8.3	8.8
3	-30	1.6	1.8	2.0	2.1	2.2	2.1	2.4	2.5	2.7	2.8	2.8	3.2	3.4	3.5	3.7	4.3	5.0	5.2	5.5	5.8	6.3	7.2	7.6	8.0	8.4
0	-25	1.1	1.4	1.4	1.5	1.6	1.6	1.9	2.0	2.1	2.3	2.3	2.7	2.8	3.0	3.1	3.8	4.4	4.6	4.9	5.1	5.7	6.5	6.8	7.2	7.6
0	-20	.6	.8	.9	.9	1.0	1.1	1.3	1.4	1.5	1.6	1.7	2.0	2.2	2.3	2.4	3.2	3.7	3.9	4.1	4.3	5.0	5.7	6.0	6.4	6.7
0	-15	-.2	-.2	-.1	-.1	-.1	.2	.3	.4	.4	.5	.8	1.0	1.1	1.2	1.2	2.2	2.6	2.7	2.9	3.0	3.8	4.4	4.7	4.9	5.2
	-10	-1.2	-1.2	-1.2	-1.2	-1.3	-.8	-.7	-.7	-.7	-.7	-.2	-.1	-.1	-.1	.0	1.1	1.3	1.4	1.5	1.6	2.6	3.0	3.2	3.4	3.6
	-5	-2.0	-2.1	-2.2	-2.2	-2.3	-1.6	-1.7	-1.7	-1.8	-1.8	-1.1	-1.1	-1.2	-1.2	-1.2	.1	.2	.2	.3	.3	1.5	1.8	1.9	2.0	2.1
	0	-2.7	-2.9	-3.0	-3.0	-3.1	-2.3	-2.5	-2.6	-2.6	-2.7	-1.8	-2.0	-2.0	-2.1	-2.1	-.8	-.7	-.7	-.7	-.7	.6	.7	.8	.9	1.0
	5	-3.3	-3.5	-3.7	-3.8	-3.9	-2.9	-3.2	-3.3	-3.4	-3.5	-2.5	-2.7	-2.8	-2.8	-2.9	-1.5	-1.6	-1.6	-1.6	-1.7	-.2	-.2	-.1	-.1	-.1
	10	-3.9	-4.2	-4.3	-4.5	-4.6	-3.6	-3.9	-4.0	-4.1	-4.2	-3.1	-3.4	-3.5	-3.6	-3.7	-2.2	-2.3	-2.4	-2.5	-2.5	-1.0	-1.0	-1.0	-1.1	-1.1
1	-35	1.3	1.5	1.6	1.7	1.9	1.8	2.1	2.2	2.4	2.5	2.5	2.9	3.0	3.2	3.4	4.0	4.6	4.9	5.1	5.4	5.9	6.8	7.1	7.5	7.9
4	-30	1.0	1.2	1.3	1.4	1.5	1.5	1.8	1.9	2.0	2.1	2.2	2.5	2.7	2.8	3.0	3.7	4.3	4.5	4.7	5.0	5.6	6.4	6.7	7.1	7.4
0	-25	.7	.8	.9	1.0	1.0	1.1	1.4	1.4	1.5	1.6	1.8	2.1	2.2	2.3	2.5	3.3	3.8	3.9	4.2	4.4	5.0	5.8	6.1	6.4	6.8
0	-20	.1	.2	.2	.3	.3	.6	.7	.8	.8	.9	1.2	1.4	1.5	1.6	1.7	2.6	3.0	3.2	3.3	3.5	4.3	5.0	5.2	5.5	5.8
0	-15	-.7	-.7	-.7	-.7	-.7	-.3	-.2	-.2	-.2	-.2	.3	.4	.5	.5	.6	1.6	1.9	2.0	2.1	2.3	3.2	3.7	3.9	4.1	4.4
	-10	-1.6	-1.7	-1.7	-1.8	-1.8	-1.2	-1.3	-1.3	-1.3	-1.3	-.7	-.7	-.7	-.6	-.6	.6	.7	.8	.9	.9	2.0	2.4	2.5	2.7	2.8
	-5	-2.4	-2.6	-2.6	-2.7	-2.8	-2.0	-2.2	-2.2	-2.3	-2.3	-1.5	-1.6	-1.6	-1.7	-1.7	-.4	-.3	-.3	-.3	-.3	1.0	1.2	1.3	1.4	1.5
	0	-3.1	-3.3	-3.4	-3.5	-3.6	-2.7	-2.9	-3.0	-3.1	-3.2	-2.2	-2.4	-2.5	-2.5	-2.6	-1.2	-1.2	-1.2	-1.3	-1.3	.1	.2	.2	.3	.3
	5	-3.7	-4.0	-4.1	-4.2	-4.3	-3.3	-3.6	-3.7	-3.8	-3.9	-2.9	-3.1	-3.2	-3.3	-3.4	-1.9	-2.0	-2.1	-2.1	-2.2	-.7	-.7	-.7	-.7	-.7
	10	-4.2	-4.6	-4.7	-4.8	-5.0	-3.9	-4.2	-4.4	-4.5	-4.6	-3.5	-3.8	-3.9	-4.0	-4.1	-2.6	-2.8	-2.8	-2.9	-3.0	-1.4	-1.5	-1.5	-1.6	-1.6
1	-35	.6	.7	.8	.8	.9	1.0	1.2	1.3	1.4	1.5	1.7	1.9	2.1	2.2	2.3	3.1	3.6	3.8	4.0	4.2	4.9	5.7	5.9	6.3	6.6
5	-30	.2	.3	.4	.4	.5	.7	.8	.9	1.0	1.1	1.3	1.5	1.6	1.7	1.8	2.7	3.2	3.3	3.5	3.7	4.5	5.2	5.4	5.7	6.0
5	-25	-.1	-.1	.0	.0	.0	.3	.4	.5	.5	.6	.9	1.1	1.2	1.3	1.4	2.3	2.7	2.8	3.0	3.2	4.0	4.6	4.9	5.1	5.4
0	-20	-.6	-.6	-.6	-.6	-.6	-.2	-.1	-.1	-.1	.0	.4	.5	.6	.6	.7	1.7	2.0	2.1	2.3	2.4	3.4	3.9	4.1	4.3	4.5
0	-15	-1.4	-1.5	-1.5	-1.5	-1.6	-1.0	-1.0	-1.0	-1.0	-1.1	-.5	-.4	-.4	-.4	-.4	.8	1.0	1.0	1.1	1.2	2.3	2.7	2.8	3.0	3.2
	-10	-2.2	-2.4	-2.5	-2.5	-2.6	-1.9	-2.0	-2.0	-2.1	-2.1	-1.4	-1.4	-1.5	-1.5	-1.5	-.2	-.1	-.1	-.1	-.1	1.2	1.4	1.5	1.6	1.7
	-5	-3.0	-3.2	-3.3	-3.4	-3.5	-2.6	-2.8	-2.9	-3.0	-3.1	-2.2	-2.3	-2.4	-2.5	-2.5	-1.1	-1.1	-1.2	-1.2	-1.2	.2	.3	.4	.4	.5
	0	-3.6	-3.9	-4.0	-4.1	-4.2	-3.3	-3.5	-3.6	-3.7	-3.9	-2.8	-3.1	-3.1	-3.2	-3.3	-1.8	-1.9	-2.0	-2.0	-2.1	-.6	-.6	-.6	-.6	-.6
	5	-4.2	-4.5	-4.7	-4.8	-5.0	-3.9	-4.2	-4.3	-4.5	-4.6	-3.5	-3.8	-3.9	-4.0	-4.1	-2.5	-2.7	-2.8	-2.9	-3.0	-1.4	-1.5	-1.5	-1.5	-1.6
	10	-4.7	-5.1	-5.2	-5.4	-5.6	-4.4	-4.8	-4.9	-5.1	-5.2	-4.0	-4.4	-4.5	-4.6	-4.8	-3.1	-3.4	-3.5	-3.6	-3.7	-2.1	-2.2	-2.3	-2.3	-2.4

Figure 4-37 (Sheet 6)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-25	5.8	6.6	7.0	7.3	7.7	6.0	6.9	7.2	7.6	8.0	6.3	7.2	7.6	8.0	8.4	6.5	7.5	7.9	8.3	8.8	6.8	7.8	8.2	8.7	9.1
	-20	5.8	6.7	7.0	7.3	7.7	6.0	6.9	7.2	7.6	8.0	6.3	7.2	7.6	8.0	8.4	6.5	7.5	7.9	8.3	8.8	6.8	7.8	8.2	8.7	9.1
	-15	5.8	6.7	7.0	7.4	7.8	6.0	6.9	7.3	7.6	8.0	6.3	7.2	7.6	8.0	8.4	6.6	7.5	7.9	8.3	8.8	6.8	7.8	8.2	8.7	9.1
	-10	5.8	6.7	7.0	7.4	7.8	6.1	6.9	7.3	7.6	8.1	6.3	7.2	7.6	8.0	8.4	6.6	7.5	7.9	8.3	8.8	6.9	7.9	8.3	8.7	9.1
	-5	5.9	6.7	7.0	7.4	7.8	6.1	6.9	7.3	7.7	8.1	6.3	7.2	7.6	8.0	8.4	6.6	7.6	7.9	8.3	8.8	6.9	7.9	8.3	8.7	9.2
	0	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.6	8.0	8.4	6.6	7.6	7.9	8.4	8.8	6.9	7.9	8.3	8.7	9.2
	5	5.9	6.7	7.1	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.6	8.0	8.4	6.7	7.6	8.0	8.4	8.8	7.0	7.9	8.3	8.7	9.2
	10	5.9	6.8	7.1	7.4	7.8	6.2	7.0	7.3	7.7	8.1	6.4	7.3	7.7	8.0	8.5	6.7	7.6	8.0	8.4	8.8	7.0	7.9	8.3	8.7	9.2
	15	6.0	6.8	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.4	7.3	7.7	8.1	8.5	6.7	7.6	8.0	8.4	8.8	7.0	8.0	8.3	8.8	9.2
	20	6.0	6.8	7.1	7.5	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.0	8.4	8.8	7.0	8.0	8.4	8.8	9.2
	25	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.7	6.2	7.0	7.3	7.7	8.1	6.4	7.3	7.7	8.0	8.4	6.7	7.6	8.0	8.4	8.8
	30	4.9	5.6	5.9	6.2	6.5	5.1	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.4	7.7
	35	4.2	4.7	5.0	5.2	5.5	4.4	5.0	5.2	5.5	5.7	4.6	5.2	5.5	5.7	6.0	4.8	5.5	5.8	6.0	6.3	5.1	5.8	6.0	6.3	6.7
	40	3.4	3.9	4.1	4.3	4.5	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.0	5.3	4.2	4.8	5.1	5.3	5.6
	45	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5
	50	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.5
	55	1.1	1.4	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.1	1.7	1.9	2.1	2.2	2.3	1.8	2.2	2.3	2.4	2.5
1	-25	5.7	6.5	6.8	7.2	7.6	5.9	6.8	7.1	7.5	7.9	6.1	7.0	7.4	7.8	8.2	6.4	7.3	7.7	8.1	8.6	6.7	7.7	8.1	8.5	8.9
0	-20	5.7	6.5	6.8	7.2	7.6	5.9	6.8	7.1	7.5	7.9	6.2	7.0	7.4	7.8	8.2	6.4	7.4	7.7	8.1	8.6	6.7	7.7	8.1	8.5	8.9
0	-15	5.7	6.5	6.8	7.2	7.6	5.9	6.8	7.1	7.5	7.9	6.2	7.1	7.4	7.8	8.2	6.5	7.4	7.7	8.1	8.6	6.7	7.7	8.1	8.5	8.9
0	-10	5.7	6.5	6.9	7.2	7.6	6.0	6.8	7.1	7.5	7.9	6.2	7.1	7.4	7.8	8.2	6.5	7.4	7.8	8.1	8.6	6.8	7.7	8.1	8.5	9.0
	-5	5.8	6.6	6.9	7.2	7.6	6.0	6.8	7.1	7.5	7.9	6.2	7.1	7.5	7.8	8.2	6.5	7.4	7.8	8.2	8.6	6.8	7.7	8.1	8.5	9.0
	0	5.8	6.6	6.9	7.2	7.6	6.0	6.8	7.2	7.5	7.9	6.3	7.1	7.5	7.8	8.2	6.5	7.4	7.8	8.2	8.6	6.8	7.8	8.1	8.5	9.0
	5	5.8	6.6	6.9	7.3	7.6	6.0	6.9	7.2	7.5	7.9	6.3	7.2	7.5	7.9	8.3	6.6	7.5	7.8	8.2	8.6	6.8	7.8	8.2	8.6	9.0
	10	5.8	6.6	6.9	7.3	7.6	6.0	6.9	7.2	7.5	7.9	6.3	7.2	7.5	7.9	8.3	6.6	7.5	7.8	8.2	8.6	6.8	7.8	8.2	8.5	9.0
	15	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.5	7.3	7.7	8.1	8.5	6.7	7.7	8.0	8.4	8.8
	20	5.5	6.2	6.5	6.8	7.2	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5
	25	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.5	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.5	6.0	6.8	7.2	7.5	7.9
	30	4.4	5.0	5.2	5.5	5.8	4.6	5.2	5.5	5.7	6.0	4.8	5.5	5.7	6.0	6.3	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	7.0
	35	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.8	5.1	4.1	4.7	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0
	40	2.9	3.3	3.5	3.7	3.8	3.1	3.5	3.7	3.9	4.1	3.3	3.8	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.7	4.9
	45	2.1	2.4	2.6	2.7	2.9	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.3	2.7	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9
	50	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.2	2.4	2.5	2.6	2.1	2.5	2.6	2.7	2.9
	52	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3
2	-25	5.6	6.4	6.7	7.1	7.5	5.8	6.7	7.0	7.4	7.7	6.1	7.0	7.3	7.7	8.1	6.3	7.3	7.6	8.0	8.4	6.6	7.6	8.0	8.4	8.8
0	-20	5.6	6.4	6.7	7.1	7.5	5.8	6.7	7.0	7.4	7.7	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.6	8.0	8.4	6.6	7.6	8.0	8.4	8.8
0	-15	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.6	8.0	8.5	6.7	7.6	8.0	8.4	8.8
0	-10	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.7	8.0	8.5	6.7	7.6	8.0	8.4	8.8
	-5	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.4	7.3	7.7	8.1	8.5	6.7	7.7	8.0	8.4	8.8
	0	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.0	8.4	8.9
	5	5.8	6.5	6.8	7.2	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9
	10	5.8	6.6	6.9	7.2	7.5	6.0	6.8	7.1	7.5	7.8	6.3	7.1	7.4	7.8	8.2	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9
	15	5.5	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.4	5.9	6.7	7.1	7.4	7.7	6.2	7.0	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5
	20	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.5	6.3	6.5	6.9	7.2	5.8	6.5	6.8	7.2	7.5	6.0	6.8	7.1	7.5	7.9
	25	4.5	5.1	5.4	5.6	5.9	4.7	5.3	5.6	5.9	6.1	4.9	5.6	5.9	6.1	6.5	5.2	5.9	6.2	6.4	6.8	5.4	6.2	6.5	6.8	7.1
	30	3.9	4.5	4.7	4.9	5.1	4.1	4.7	4.9	5.1	5.4	4.3	4.9	5.2	5.4	5.7	4.6	5.2	5.4	5.7	6.0	4.8	5.5	5.7	6.0	6.3
	35	3.2	3.6	3.8	4.0	4.2	3.4	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.8	5.0	4.0	4.6	4.8	5.0	5.3
	40	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.8	4.0	4.2
	45	1.7	1.9	2.0	2.1	2.3	1.8	2.1	2.2	2.3	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.2
	50	1.0	1.2	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.2	2.3
3	-30	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.7	8.0	8.5	6.7	7.6	8.0	8.4	8.8
0	-25	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.7	8.0	8.5	6.7	7.6	8.0	8.4	8.8
0	-20	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1	6.4	7.3	7.7	8.0	8.5	6.7	7.6	8.0	8.4	8.8
0	-15	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.4	7.3	7.7	8.1	8.5	6.7	7.6	8.0	8.4	8.8
	-10	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.5	7.3	7.7	8.1	8.5	6.7	7.7	8.0	8.4	8.8
	-5	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.0	8.4	8.9
	0	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.0	8.4	8.8
	5	5.6	6.3	6.6	6.9	7.3	5.8	6.6	6.9	7.2	7.5	6.0	6.9	7.2	7.5	7.9	6.3	7.2	7.5	7.8	8.2	6.6	7.5	7.8	8.2	8.6
	10	5.3	6.0	6.3	6.6	6.9	5.5	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.5	6.0	6.8	7.2	7.5	7.9	6.3	7.2	7.5	7.8	8.2
	15	5.0	5.6	5.9	6.2	6.5	5.2	5.9	6.1	6.4	6.7	5.4	6.2	6.4	6.7	7.1	5.7	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.4	7.7
	20	4.5	5.1	5.4	5.6	5.9	4.7	5.4	5.6	5.9	6.2	5.0	5.6	5.9	6.2	6.5	5.2	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1
	25	4.0	4.6	4.8	5.0	5.3	4.2	4.8	5.0	5.2	5.5	4.5	5.0	5.3	5.5	5.8	4.7	5.3	5.6	5.8	6.1	4.9	5.6	5.8	6.1	6.4
	30	3.5	4.0	4.1	4.3	4.6	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.8	5.1	4.1	4.7	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.7
	35	2.7	3.1	3.3	3.4	3.6	2.9	3.3	3.5	3.6	3.8	3.1	3.5	3.7	3.9	4.1	3.3	3.8	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6
	40	2.0	2.3	2.4	2.5	2.6	2.1	2.4	2.6	2.7	2.8	2.3	2.7	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.3	2.7	3.1	3.3	3.4	3.6
	45	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4	1.9	2.2	2.4	2.5	2.6
	48	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.2	1.5	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0

525AFM-06-01

Figure 4-38 (Sheet 1 of 8)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS					11000 WIND KNOTS					10500 WIND KNOTS					9500 WIND KNOTS					8500 WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-25	7.1	8.2	8.6	9.0	9.5	7.7	8.9	9.3	9.8	10.4	8.6	9.9	10.4	10.9	11.5	10.5	12.1	12.7	13.4	14.2	12.9	14.8	15.6	16.5	17.4
	-20	7.1	8.2	8.6	9.0	9.5	7.8	8.9	9.3	9.8	10.4	8.6	9.9	10.4	10.9	11.5	10.6	12.1	12.7	13.4	14.2	12.9	14.9	15.6	16.5	17.4
	-15	7.1	8.2	8.6	9.0	9.5	7.8	8.9	9.4	9.8	10.4	8.6	9.9	10.4	10.9	11.5	10.6	12.1	12.8	13.4	14.2	13.0	14.9	15.6	16.5	17.4
	-10	7.2	8.2	8.6	9.1	9.5	7.8	8.9	9.4	9.9	10.4	8.7	9.9	10.4	10.9	11.5	10.6	12.2	12.8	13.4	14.2	13.0	14.9	15.7	16.5	17.4
	-5	7.2	8.2	8.6	9.1	9.6	7.8	9.0	9.4	9.9	10.4	8.7	9.9	10.4	11.0	11.5	10.7	12.2	12.8	13.5	14.2	13.1	14.9	15.7	16.5	17.4
	0	7.2	8.2	8.6	9.1	9.6	7.9	9.0	9.4	9.9	10.4	8.7	10.0	10.4	11.0	11.6	10.7	12.2	12.8	13.5	14.2	13.1	15.0	15.7	16.5	17.4
	5	7.3	8.3	8.7	9.1	9.6	7.9	9.0	9.4	9.9	10.4	8.8	10.0	10.5	11.0	11.6	10.7	12.2	12.8	13.5	14.2	13.1	15.0	15.7	16.5	17.4
	10	7.3	8.3	8.7	9.1	9.6	7.9	9.0	9.5	9.9	10.4	8.8	10.0	10.5	11.0	11.6	10.8	12.3	12.9	13.5	14.2	13.2	15.0	15.8	16.6	17.4
	15	7.3	8.3	8.7	9.1	9.6	8.0	9.0	9.5	9.9	10.4	8.8	10.0	10.5	11.0	11.6	10.8	12.3	12.9	13.5	14.2	13.2	15.1	15.8	16.6	17.4
	20	7.3	8.3	8.7	9.2	9.6	8.0	9.1	9.5	10.0	10.5	8.9	10.1	10.5	11.0	11.6	10.8	12.3	12.9	13.5	14.2	13.3	15.1	15.8	16.6	17.5
	25	7.0	8.0	8.3	8.7	9.2	7.6	8.7	9.1	9.5	10.0	8.5	9.7	10.1	10.6	11.1	10.5	11.9	12.4	13.1	13.7	12.8	14.6	15.3	16.1	16.9
	30	6.2	7.0	7.3	7.7	8.1	6.7	7.7	8.0	8.4	8.9	7.5	8.6	9.0	9.4	9.9	9.4	10.7	11.2	11.8	12.4	11.7	13.3	13.9	14.6	15.4
	35	5.3	6.1	6.3	6.7	7.0	5.8	6.7	7.0	7.3	7.7	6.6	7.5	7.9	8.3	8.7	8.3	9.5	10.0	10.5	11.0	10.5	12.0	12.6	13.2	13.9
	40	4.5	5.1	5.3	5.6	5.9	5.0	5.7	5.9	6.2	6.6	5.6	6.4	6.8	7.1	7.5	7.2	8.3	8.7	9.2	9.6	9.3	10.6	11.2	11.8	12.4
	45	3.6	4.1	4.3	4.6	4.8	4.1	4.7	4.9	5.2	5.4	4.7	5.4	5.7	6.0	6.3	6.2	7.1	7.5	7.8	8.3	8.1	9.3	9.8	10.3	10.8
	50	2.8	3.2	3.4	3.6	3.8	3.2	3.7	3.9	4.1	4.3	3.8	4.4	4.6	4.9	5.1	5.2	6.0	6.3	6.6	7.0	6.9	8.0	8.4	8.8	9.3
	55	2.0	2.4	2.5	2.6	2.8	2.5	2.8	3.0	3.2	3.3	3.0	3.5	3.7	3.9	4.1	4.3	5.0	5.2	5.5	5.8	5.9	6.8	7.2	7.6	8.0
1	-25	7.0	8.0	8.4	8.8	9.3	7.6	8.7	9.2	9.6	10.2	8.5	9.7	10.2	10.7	11.3	10.4	11.9	12.5	13.2	13.9	12.8	14.6	15.4	16.2	17.2
0	-20	7.0	8.0	8.4	8.8	9.3	7.6	8.7	9.2	9.6	10.2	8.5	9.7	10.2	10.7	11.3	10.4	11.9	12.5	13.2	13.9	12.8	14.7	15.4	16.2	17.1
0	-15	7.0	8.0	8.4	8.9	9.3	7.6	8.7	9.2	9.7	10.2	8.5	9.7	10.2	10.7	11.3	10.4	12.0	12.6	13.2	13.9	12.8	14.7	15.4	16.2	17.1
0	-10	7.0	8.0	8.4	8.9	9.3	7.7	8.8	9.2	9.7	10.2	8.5	9.7	10.2	10.7	11.3	10.5	12.0	12.6	13.2	13.9	12.9	14.7	15.4	16.2	17.1
	-5	7.1	8.1	8.5	8.9	9.4	7.7	8.8	9.2	9.7	10.2	8.6	9.8	10.2	10.8	11.3	10.5	12.0	12.6	13.2	13.9	12.9	14.7	15.5	16.3	17.1
	0	7.1	8.1	8.5	8.9	9.4	7.7	8.8	9.2	9.7	10.2	8.6	9.8	10.3	10.8	11.3	10.6	12.0	12.6	13.3	14.0	12.9	14.8	15.5	16.3	17.2
	5	7.1	8.1	8.5	8.9	9.4	7.8	8.8	9.3	9.7	10.2	8.6	9.8	10.3	10.8	11.4	10.6	12.1	12.6	13.3	14.0	13.0	14.8	15.5	16.3	17.2
	10	7.1	8.1	8.5	8.9	9.4	7.8	8.8	9.3	9.7	10.2	8.6	9.8	10.3	10.8	11.3	10.6	12.1	12.6	13.3	13.9	13.0	14.8	15.5	16.3	17.1
	15	7.0	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.0	8.5	9.7	10.1	10.6	11.2	10.5	11.9	12.5	13.1	13.7	12.9	14.6	15.3	16.1	16.9
	20	6.8	7.7	8.1	8.4	8.9	7.4	8.4	8.8	9.2	9.7	8.2	9.4	9.8	10.3	10.8	10.2	11.5	12.1	12.7	13.3	12.5	14.2	14.9	15.6	16.5
	25	6.3	7.2	7.5	7.9	8.3	6.9	7.8	8.2	8.6	9.0	7.7	8.7	9.2	9.6	10.1	9.6	10.9	11.4	12.0	12.6	11.9	13.5	14.1	14.9	15.6
	30	5.6	6.3	6.6	6.9	7.3	6.1	6.9	7.3	7.6	8.0	6.8	7.8	8.2	8.6	9.0	8.6	9.8	10.3	10.8	11.4	10.8	12.4	12.9	13.6	14.3
	35	4.8	5.5	5.7	6.0	6.3	5.3	6.0	6.3	6.6	7.0	6.0	6.8	7.2	7.5	7.9	7.7	8.7	9.2	9.6	10.1	9.7	11:1	11.7	12.3	12.9
	40	3.9	4.5	4.7	5.0	5.2	4.4	5.0	5.3	5.6	5.8	5.1	5.8	6.1	6.4	6.7	6.6	7.5	7.9	8.3	8.8	8.6	9.8	10.3	10.8	11.4
	45	3.1	3.6	3.7	3.9	4.1	3.6	4.1	4.3	4.5	4.7	4.2	4.8	5.0	5.3	5.5	5.6	6.4	6.7	7.1	7.4	7.4	8.4	8.9	9.4	9.9
	50	2.3	2.7	2.8	3.0	3.1	2.7	3.2	3.3	3.5	3.7	3.3	3.8	4.0	4.2	4.4	4.6	5.3	5.6	5.9	6.2	6.3	7.2	7.6	8.0	8.5
	52	1.9	2.2	2.3	2.5	2.6	2.3	2.7	2.8	3.0	3.1	2.9	3.3	3.5	3.7	3.9	4.1	4.8	5.0	5.3	5.6	5.7	6.6	6.9	7.3	7.7
2	-25	6.9	7.9	8.3	8.7	9.2	7.5	8.6	9.0	9.5	10.0	8.4	9.6	10.1	10.6	11.2	10.3	11.8	12.4	13.1	13.8	12.7	14.5	15.3	16.1	17.0
0	-20	6.9	7.9	8.3	8.7	9.2	7.6	8.6	9.1	9.5	10.0	8.4	9.6	10.1	10.6	11.2	10.3	11.8	12.4	13.1	13.8	12.7	14.5	15.3	16.1	16.9
0	-15	7.0	7.9	8.3	8.7	9.2	7.6	8.7	9.1	9.5	10.0	8.4	9.6	10.1	10.6	11.2	10.4	11.8	12.4	13.1	13.8	12.7	14.6	15.3	16.1	17.0
0	-10	7.0	8.0	8.3	8.8	9.2	7.6	8.7	9.1	9.5	10.0	8.5	9.6	10.1	10.6	11.2	10.4	11.9	12.4	13.1	13.8	12.8	14.6	15.3	16.1	17.0
	-5	7.0	8.0	8.4	8.8	9.2	7.6	8.7	9.1	9.6	10.1	8.5	9.7	10.1	10.6	11.2	10.5	11.9	12.5	13.1	13.8	12.8	14.6	15.3	16.1	17.0
	0	7.0	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.1	8.5	9.7	10.2	10.7	11.2	10.5	11.9	12.5	13.1	13.8	12.9	14.7	15.4	16.1	17.0
	5	7.1	8.0	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.7	10.2	10.7	11.2	10.5	12.0	12.5	13.1	13.8	12.9	14.7	15.4	16.2	17.0
	10	7.1	8.1	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.2	10.6	12.0	12.5	13.2	13.8	13.0	14.7	15.4	16.2	17.0
	15	6.8	7.7	8.0	8.4	8.8	7.4	8.4	8.8	9.2	9.6	8.2	9.3	9.8	10.2	10.7	10.2	11.5	12.1	12.6	13.3	12.5	14.2	14.9	15.6	16.4
	20	6.3	7.1	7.5	7.8	8.2	6.9	7.8	8.2	8.6	9.0	7.7	8.7	9.1	9.6	10.1	9.6	10.9	11.4	11.9	12.5	11.9	13.5	14.1	14.8	15.6
	25	5.7	6.5	6.8	7.1	7.4	6.2	7.1	7.4	7.8	8.2	7.0	7.9	8.3	8.7	9.2	8.8	10.0	10.5	11.0	11.6	11.0	12.5	13.1	13.8	14.5
	30	5.1	5.7	6.0	6.3	6.6	5.6	6.3	6.6	6.9	7.3	6.3	7.1	7.5	7.8	8.2	8.0	9.1	9.5	10.0	10.5	10.1	11.5	12.1	12.7	13.3
	35	4.3	4.8	5.1	5.3	5.6	4.8	5.4	5.7	5.9	6.2	5.4	6.2	6.5	6.8	7.1	7.0	8.0	8.3	8.8	9.2	9.0	10.3	10.8	11.3	11.9
	40	3.4	3.9	4.1	4.3	4.5	3.9	4.4	4.7	4.9	5.1	4.5	5.2	5.4	5.7	6.0	6.0	6.8	7.1	7.5	7.9	7.8	8.9	9.4	9.9	10.4
	45	2.6	3.0	3.1	3.3	3.5	3.0	3.5	3.7	3.8	4.0	3.6	4.2	4.4	4.6	4.8	5.0	5.7	6.0	6.3	6.6	6.7	7.6	8.0	8.5	8.9
	50	1.9	2.2	2.3	2.4	2.5	2.3	2.6	2.7	2.9	3.1	2.8	3.2	3.4	3.6	3.8	4.1	4.7	4.9	5.2	5.5	5.7	6.5	6.8	7.2	7.6
3	-30	7.0	7.9	8.3	8.8	9.2	7.6	8.7	9.1	9.6	10.1	8.4	9.6	10.1	10.6	11.2	10.4	11.9	12.4	13.1	13.8	12.7	14.6	15.3	16.1	17.0
0	-25	7.0	7.9	8.3	8.8	9.2	7.6	8.7	9.1	9.5	10.1	8.4	9.6	10.1	10.6	11.2	10.4	11.9	12.4	13.1	13.8	12.7	14.6	15.3	16.1	17.0
0	-20	7.0	8.0	8.3	8.8	9.2	7.6	8.7	9.1	9.6	10.1	8.5	9.6	10.1	10.6	11.2	10.4	11.9	12.5	13.1	13.8	12.8	14.6	15.3	16.1	17.0
0	-15	7.0	8.0	8.4	8.8	9.2	7.6	8.7	9.1	9.6	10.1	8.5	9.7	10.1	10.6	11.2	10.4	11.9	12.5	13.1	13.8	12.8	14.6	15.3	16.1	17.0
	-10	7.0	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.1	8.5	9.7	10.1	10.6	11.2	10.5	11.9	12.5	13.1	13.8	12.9	14.6	15.3	16.1	17.0
	-5	7.1	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.1	8.5	9.7	10.2	10.7	11.2	10.5	11.9	12.5	13.1	13.8	12.9	14.7	15.4	16.1	17.0
	0	7.1	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.0	8.5	9.7	10.1	10.6	11.2	10.5	11.9	12.5	13.1	13.7	12.9	14.6	15.3	16.1	16.9
	5	6.9	7.8	8.2	8.5	9.0	7.5	8.5	8.9	9.3	9.8	8.3	9.5	9.9	10.4	10.9	10.3	11.7	12.2	12.8	13.5	12.7	14.4	15.0	15.8	16.6
	10	6.6	7.5	7.8	8.2	8.6	7.2	8.2	8.5	8.9	9.4	8.0	9.1	9.5	10.0	10.5	9.9	11.3	11.8	12.4	13.0	12.3	13.9	14.6	15.3	16.1
	15	6.2	7.0	7.4	7.7	8.1	6.8	7.7	8.0	8.4	8.8	7.6	8.6	9.0	9.4	9.9	9.5	10.7	11.2	11.8	12.4	11.7	13.3	14.0	14.6	15.4
	20	5.7	6.5	6.8	7.1	7.4	6.3	7.1	7.4	7.8	8.2	7.0	8.0	8.3	8.7	9.2	8.8	10.0	10.5	11.0	11.6	11.0	12.5	13.1	13.8	14.5
	25	5.2	5.9	6.1	6.4	6.7	5.7	6.5	6.8	7.1	7.4	6.4	7.3	7.6	8.0	8.4	8.1	9.3	9.7	10.2	10.7	10.3	11.7	12.2	12.8	13.5
	30	4.6	5.2	5.4	5.7	6.0	5.1	5.8	6.0	6.3	6.6	5.8	6.5	6.8	7.2	7.5	7.4	8.4	8.8	9.2	9.7	9.4	10.7	11.3	11.8	12.4
	35	3.7	4.3	4.5	4.7	4.9	4.2	4.8	5.0	5.3	5.5	4.9	5.5	5.8	6.1	6.4	6.3	7.2	7.6	8.0	8.4	8.3	9.4	9.9	10.4	10.9
	40	2.9	3.3	3.5	3.7	3.9	3.4	3.8	4.0	4.2	4.4	4.0	4.5	4.7	5.0	5.2	5.4	6.1	6.4	6.7	7.1	7.1	8.1	8.5	9.0	9.5
	45	2.1	2.5	2.6	2.7	2.9	2.6	2.9	3.1	3.2	3.4	3.1	3.6	3.8	3.9	4.2	4.4	5.1	5.3	5.6	5.9	6.0	6.9	7.3	7.6	8.1
	48	1.6	1.9	2.0	2.1	2.2	2.0	2.3	2.4	2.6	2.7	2.5	2.9	3.1	3.3	3.4	3.8	4.4	4.6	4.8	5.1	5.3	6.1	6.4	6.8	7.1

525AFM-06-01

Figure 4-38 (Sheet 2)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		12375					12200					12000					11800					11600					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
4	-30	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.4	7.3	7.7	8.1	8.5	6.7	7.7	8.0	8.4	8.9	
0	-25	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.4	7.3	7.7	8.1	8.5	6.7	7.7	8.0	8.4	8.9	
0	-20	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.7	7.7	8.0	8.4	8.9	
0	-15	5.7	6.5	6.8	7.1	7.5	5.9	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.0	8.4	8.9	
	-10	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.4	8.9	
	-5	5.8	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
	0	5.7	6.5	6.8	7.1	7.4	6.0	6.7	7.0	7.4	7.7	6.2	7.0	7.3	7.7	8.1	6.5	7.3	7.7	8.0	8.4	6.8	7.7	8.0	8.4	8.8	
	5	5.4	6.1	6.4	6.7	7.0	5.6	6.3	6.6	6.9	7.3	5.9	6.6	6.9	7.3	7.6	6.1	6.9	7.2	7.6	8.0	6.4	7.2	7.6	7.9	8.3	
	10	4.9	5.6	5.8	6.1	6.4	5.1	5.8	6.1	6.3	6.6	5.4	6.1	6.3	6.6	7.0	5.6	6.4	6.6	7.0	7.3	5.9	6.7	7.0	7.3	7.6	
	15	4.5	5.0	5.3	5.5	5.8	4.7	5.3	5.5	5.8	6.0	4.9	5.6	5.8	6.1	6.4	5.1	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.0	
	20	4.0	4.6	4.8	5.0	5.2	4.2	4.8	5.0	5.2	5.5	4.5	5.0	5.3	5.5	5.8	4.7	5.3	5.6	5.8	6.1	4.9	5.6	5.8	6.1	6.4	
	25	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.8	5.0	5.2	4.2	4.8	5.0	5.3	5.5	4.5	5.1	5.3	5.5	5.8	
	30	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.8	3.9	4.1	3.4	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	5.0	
	35	2.2	2.5	2.7	2.8	3.0	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	3.0	3.4	3.6	3.8	4.0	
	40	1.5	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	3.0	
	45	0.8	1.0	1.0	1.1	1.2	0.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	
	46	0.6	0.7	0.8	0.9	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	
5	-35	5.7	6.5	6.8	7.1	7.5	5.9	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
0	-30	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.1	7.4	7.8	6.2	7.0	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.4	8.9	
0	-25	5.7	6.5	6.8	7.1	7.5	5.9	6.7	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.4	8.9	
0	-20	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.4	8.9	
	-15	5.8	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.4	8.9	
	-10	5.6	6.4	6.7	7.0	7.3	5.9	6.6	6.9	7.3	7.6	6.1	6.9	7.2	7.6	8.0	6.4	7.2	7.6	7.9	8.3	6.7	7.6	7.9	8.3	8.7	
	-5	5.5	6.2	6.5	6.8	7.2	5.7	6.5	6.8	7.1	7.4	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.6	7.4	7.8	8.1	8.5	
	0	5.3	6.0	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.2	
	5	4.8	5.5	5.7	6.0	6.3	5.0	5.7	6.0	6.2	6.5	5.3	6.0	6.3	6.5	6.9	5.5	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.5	
	10	4.4	5.0	5.2	5.4	5.7	4.6	5.2	5.4	5.7	5.9	4.8	5.5	5.7	6.0	6.2	5.1	5.7	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	
	15	3.9	4.5	4.7	4.9	5.1	4.1	4.7	4.9	5.1	5.4	4.4	4.9	5.2	5.4	5.7	4.6	5.2	5.4	5.7	6.0	4.9	5.5	5.7	6.0	6.3	
	20	3.6	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	4.9	5.2	4.2	4.8	5.0	5.2	5.5	4.5	5.1	5.3	5.5	5.8	
	25	3.2	3.6	3.8	4.0	4.2	3.4	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.8	5.0	4.1	4.6	4.8	5.0	5.3	
	30	2.5	2.8	3.0	3.1	3.3	2.7	3.0	3.2	3.3	3.5	2.9	3.3	3.4	3.6	3.7	3.1	3.5	3.7	3.8	4.0	3.3	3.7	3.9	4.1	4.3	
	35	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.7	2.8	2.3	2.6	2.8	2.9	3.0	2.5	2.9	3.0	3.2	3.3	
	40	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.6	1.4	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.4	
	44	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.8	0.9	0.9	0.8	0.9	1.0	1.1	1.1	1.0	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	
6	-35	5.7	6.5	6.8	7.2	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
0	-30	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
0	-25	5.8	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
0	-20	5.8	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
	-15	5.7	6.5	6.8	7.1	7.4	5.9	6.7	7.0	7.3	7.7	6.2	7.0	7.3	7.7	8.0	6.5	7.3	7.7	8.0	8.4	6.8	7.7	8.0	8.4	8.8	
	-10	5.6	6.3	6.6	6.9	7.2	5.8	6.5	6.8	7.1	7.5	6.1	6.8	7.1	7.5	7.8	6.3	7.1	7.5	7.8	8.2	6.6	7.5	7.8	8.2	8.6	
	-5	5.3	6.0	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.4	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	
	0	4.8	5.4	5.6	5.9	6.2	5.0	5.6	5.9	6.2	6.4	5.2	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.4	
	5	4.3	4.9	5.1	5.3	5.6	4.5	5.1	5.3	5.6	5.8	4.7	5.4	5.6	5.9	6.1	5.0	5.6	5.9	6.2	6.5	5.2	5.9	6.2	6.5	6.8	
	10	3.9	4.4	4.6	4.8	5.0	4.1	4.6	4.8	5.0	5.3	4.3	4.9	5.1	5.3	5.6	4.5	5.1	5.3	5.6	5.9	4.8	5.4	5.6	5.9	6.2	
	15	3.5	3.9	4.1	4.3	4.5	3.6	4.1	4.3	4.5	4.7	3.9	4.4	4.6	4.8	5.0	4.1	4.6	4.8	5.1	5.3	4.3	4.9	5.1	5.4	5.6	
	20	3.1	3.5	3.7	3.8	4.0	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	3.9	4.5	4.7	4.9	5.1	
	25	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	
	30	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.9	3.0	2.5	2.8	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.6	
	35	1.2	1.5	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.7	
	40	0.6	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.5	1.5	1.3	1.5	1.6	1.7	1.8	
	42	0.3	0.4	0.5	0.5	0.6	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	0.9	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.2	1.3	1.4	
7	-35	5.8	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.1	8.5	8.9	
0	-30	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.7	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	6.8	7.7	8.0	8.4	8.8	
0	-25	5.7	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.3	7.7	6.2	7.0	7.3	7.6	8.0	6.5	7.3	7.6	8.0	8.4	6.8	7.6	8.0	8.4	8.8	
0	-20	5.7	6.4	6.7	7.0	7.3	5.9	6.6	6.9	7.3	7.6	6.1	6.9	7.2	7.6	7.9	6.4	7.3	7.6	7.9	8.3	6.7	7.6	7.9	8.3	8.7	
	-15	5.4	6.1	6.4	6.7	7.0	5.7	6.4	6.7	7.0	7.3	5.9	6.7	7.0	7.3	7.6	6.2	7.0	7.3	7.6	8.0	6.5	7.3	7.6	8.0	8.4	
	-10	5.2	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.6	7.0	5.6	6.4	6.7	7.0	7.3	5.9	6.7	7.0	7.3	7.6	6.2	7.0	7.3	7.6	8.0	
	-5	4.7	5.3	5.6	5.8	6.1	4.9	5.6	5.8	6.1	6.4	5.2	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.0	5.7	6.4	6.7	7.0	7.4	
	0	4.2	4.8	5.0	5.2	5.5	4.4	5.0	5.2	5.5	5.7	4.7	5.3	5.5	5.8	6.0	4.9	5.6	5.8	6.1	6.4	5.2	5.8	6.1	6.4	6.7	
	5	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	4.9	5.1	4.2	4.8	5.0	5.2	5.4	4.5	5.0	5.3	5.5	5.8	4.7	5.3	5.5	5.8	6.1	
	10	3.4	3.8	4.0	4.2	4.4	3.6	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	4.9	5.2	4.2	4.8	5.0	5.2	5.5	
	15	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.7	3.9	4.1	3.4	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	5.0	
	20	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	
	25	2.0	2.3	2.5	2.6	2.7	2.2	2.5	2.6	2.8	2.9	2.4	2.8	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	
	30	1.4	1.7	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.8	2.0	2.1	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.9	
	35	0.8	1.0	1.0	1.1	1.2	1.0	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.8	1.9	2.1	
	40	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.1	1.2	

525AFM-06-01

Figure 4-38 (Sheet 3)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2

SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS					11000 WIND KNOTS					10500 WIND KNOTS					9500 WIND KNOTS					8500 WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
4	-30	7.0	8.0	8.4	8.8	9.3	7.6	8.7	9.1	9.6	10.1	8.5	9.7	10.1	10.7	11.2	10.4	11.9	12.5	13.1	13.8	12.8	14.6	15.3	16.1	17.0
0	-25	7.0	8.0	8.4	8.8	9.2	7.6	8.7	9.1	9.6	10.1	8.5	9.7	10.1	10.6	11.2	10.4	11.9	12.5	13.1	13.8	12.8	14.6	15.3	16.1	17.0
0	-20	7.0	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.1	8.5	9.7	10.1	10.6	11.2	10.5	11.9	12.5	13.1	13.8	12.9	14.6	15.3	16.1	17.0
0	-15	7.1	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.1	8.5	9.7	10.2	10.7	11.2	10.5	11.9	12.5	13.1	13.8	12.9	14.7	15.4	16.1	17.0
	-10	7.1	8.0	8.4	8.8	9.2	7.7	8.8	9.2	9.6	10.1	8.6	9.7	10.2	10.7	11.2	10.5	12.0	12.5	13.1	13.8	12.9	14.7	15.4	16.1	17.0
	-5	7.1	8.1	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.2	10.6	12.0	12.5	13.1	13.8	13.0	14.7	15.4	16.1	17.0
	0	7.1	8.0	8.4	8.7	9.2	7.7	8.7	9.1	9.5	10.0	8.5	9.7	10.1	10.6	11.1	10.5	11.9	12.4	13.0	13.7	12.9	14.6	15.3	16.0	16.8
	5	6.7	7.6	7.9	8.3	8.7	7.3	8.3	8.6	9.0	9.5	8.1	9.2	9.6	10.1	10.6	10.1	11.4	11.9	12.5	13.1	12.4	14.0	14.7	15.4	16.2
	10	6.1	7.0	7.3	7.6	8.0	6.7	7.6	8.0	8.3	8.7	7.5	8.5	8.9	9.3	9.8	9.4	10.6	11.1	11.7	12.2	11.7	13.2	13.8	14.5	15.2
	15	5.6	6.4	6.7	7.0	7.3	6.2	7.0	7.3	7.7	8.1	6.9	7.9	8.2	8.6	9.1	8.8	9.9	10.4	10.9	11.4	11.0	12.4	13.0	13.7	14.3
	20	5.2	5.9	6.1	6.4	6.7	5.7	6.5	6.8	7.1	7.4	6.4	7.3	7.6	8.0	8.4	8.1	9.2	9.7	10.1	10.7	10.3	11.7	12.2	12.8	13.5
	25	4.7	5.3	5.6	5.8	6.1	5.2	5.9	6.2	6.5	6.8	5.9	6.7	7.0	7.3	7.7	7.5	8.6	9.0	9.4	9.9	9.6	10.9	11.5	12.0	12.6
	30	4.0	4.6	4.8	5.0	5.3	4.5	5.1	5.4	5.6	5.9	5.2	5.9	6.1	6.4	6.8	6.7	7.6	8.0	8.4	8.8	8.7	9.9	10.3	10.9	11.4
	35	3.2	3.7	3.9	4.0	4.2	3.7	4.2	4.4	4.6	4.8	4.3	4.9	5.1	5.4	5.6	5.7	6.5	6.8	7.2	7.5	7.5	8.6	9.0	9.5	10.0
	40	2.4	2.8	2.9	3.1	3.2	2.8	3.2	3.4	3.6	3.8	3.4	3.9	4.1	4.3	4.5	4.8	5.4	5.7	6.0	6.3	6.4	7.3	7.7	8.1	8.5
	45	1.7	1.9	2.1	2.2	2.3	2.1	2.4	2.5	2.7	2.8	2.6	3.0	3.2	3.3	3.5	3.9	4.4	4.7	4.9	5.2	5.4	6.2	6.5	6.9	7.2
	46	1.5	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.4	2.5	2.4	2.8	2.9	3.1	3.2	3.6	4.2	4.4	4.6	4.8	5.1	5.9	6.2	6.5	6.9
5	-35	7.1	8.0	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.5	9.7	10.2	10.7	11.3	10.5	12.0	12.5	13.2	13.9	12.9	14.7	15.4	16.2	17.1
0	-30	7.1	8.0	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.7	10.2	10.7	11.2	10.5	12.0	12.5	13.1	13.8	12.9	14.7	15.4	16.2	17.0
0	-25	7.1	8.0	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.7	10.2	10.7	11.2	10.5	12.0	12.5	13.1	13.8	12.9	14.7	15.4	16.1	17.0
0	-20	7.1	8.0	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.7	10.2	10.7	11.2	10.5	12.0	12.5	13.1	13.8	12.9	14.7	15.4	16.1	17.0
	-15	7.1	8.1	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.2	10.6	12.0	12.5	13.1	13.8	13.0	14.7	15.4	16.1	17.0
	-10	7.0	7.9	8.3	8.7	9.1	7.6	8.6	9.0	9.4	9.9	8.5	9.6	10.0	10.5	11.0	10.4	11.8	12.3	12.9	13.6	12.8	14.5	15.2	15.9	16.7
	-5	6.9	7.8	8.1	8.5	8.9	7.5	8.5	8.8	9.3	9.7	8.3	9.4	9.8	10.3	10.8	10.3	11.6	12.1	12.7	13.4	12.6	14.3	15.0	15.7	16.5
	0	6.6	7.4	7.8	8.1	8.5	7.2	8.1	8.5	8.9	9.3	8.0	9.1	9.5	9.9	10.4	9.9	11.2	11.7	12.3	12.9	12.3	13.9	14.5	15.2	16.0
	5	6.1	6.9	7.2	7.5	7.9	6.7	7.5	7.9	8.2	8.6	7.4	8.4	8.8	9.2	9.7	9.3	10.5	11.0	11.6	12.1	11.6	13.1	13.7	14.4	15.1
	10	5.6	6.3	6.6	6.9	7.2	6.1	6.9	7.2	7.6	8.0	6.9	7.8	8.1	8.5	8.9	8.7	9.8	10.3	10.8	11.3	10.9	12.3	12.9	13.5	14.2
	15	5.1	5.8	6.0	6.3	6.6	5.6	6.4	6.7	7.0	7.3	6.3	7.2	7.5	7.9	8.3	8.1	9.1	9.6	10.0	10.5	10.2	11.6	12.1	12.7	13.3
	20	4.7	5.3	5.6	5.8	6.1	5.2	5.9	6.2	6.5	6.8	5.9	6.7	7.0	7.3	7.7	7.5	8.6	9.0	9.4	9.9	9.6	10.9	11.4	12.0	12.6
	25	4.3	4.9	5.1	5.3	5.6	4.8	5.4	5.7	6.0	6.2	5.5	6.2	6.5	6.8	7.1	7.0	8.0	8.4	8.8	9.2	9.1	10.3	10.8	11.3	11.9
	30	3.5	4.0	4.2	4.4	4.6	4.0	4.5	4.7	5.0	5.2	4.6	5.2	5.5	5.7	6.0	6.1	6.9	7.2	7.6	8.0	7.9	9.0	9.5	9.9	10.4
	35	2.7	3.1	3.2	3.4	3.6	3.2	3.6	3.8	3.9	4.1	3.7	4.3	4.5	4.7	4.9	5.1	5.8	6.1	6.4	6.7	6.8	7.8	8.1	8.6	9.0
	40	1.9	2.2	2.4	2.5	2.6	2.3	2.7	2.8	3.0	3.1	2.9	3.3	3.5	3.7	3.9	4.2	4.8	5.0	5.3	5.5	5.8	6.6	6.9	7.3	7.7
	44	1.3	1.6	1.6	1.7	1.8	1.7	2.0	2.1	2.2	2.3	2.2	2.6	2.7	2.9	3.0	3.5	4.0	4.2	4.4	4.6	4.9	5.7	5.9	6.2	6.6
6	-35	7.1	8.1	8.4	8.9	9.3	7.7	8.8	9.2	9.7	10.1	8.6	9.8	10.2	10.7	11.3	10.6	12.0	12.6	13.2	13.9	13.0	14.8	15.5	16.2	17.1
0	-30	7.1	8.1	8.4	8.8	9.3	7.7	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.3	10.6	12.0	12.6	13.2	13.9	13.0	14.7	15.4	16.2	17.0
0	-25	7.1	8.1	8.4	8.8	9.3	7.8	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.3	10.6	12.0	12.6	13.2	13.9	13.0	14.8	15.4	16.2	17.0
0	-20	7.1	8.1	8.4	8.8	9.3	7.8	8.8	9.2	9.6	10.1	8.7	9.8	10.2	10.7	11.2	10.6	12.0	12.6	13.2	13.8	13.0	14.8	15.4	16.2	17.0
	-15	7.1	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.0	8.6	9.7	10.2	10.6	11.1	10.6	12.0	12.5	13.1	13.7	13.0	14.7	15.3	16.1	16.9
	-10	6.9	7.8	8.2	8.5	8.9	7.5	8.5	8.9	9.3	9.8	8.4	9.5	9.9	10.4	10.9	10.4	11.7	12.2	12.8	13.4	12.7	14.4	15.1	15.8	16.6
	-5	6.6	7.4	7.8	8.1	8.5	7.2	8.1	8.5	8.9	9.3	8.0	9.1	9.5	9.9	10.4	10.0	11.3	11.8	12.3	12.9	12.3	13.9	14.5	15.2	16.0
	0	6.0	6.8	7.1	7.4	7.8	6.6	7.5	7.8	8.2	8.6	7.4	8.4	8.8	9.2	9.6	9.3	10.5	11.0	11.5	12.0	11.5	13.0	13.6	14.3	15.0
	5	5.5	6.2	6.5	6.8	7.1	6.1	6.9	7.2	7.5	7.9	6.8	7.7	8.1	8.4	8.8	8.6	9.7	10.2	10.7	11.2	10.8	12.2	12.8	13.4	14.1
	10	5.0	5.7	5.9	6.2	6.5	5.6	6.3	6.6	6.9	7.2	6.3	7.1	7.4	7.8	8.2	8.0	9.0	9.5	9.9	10.4	10.1	11.5	12.0	12.6	13.2
	15	4.6	5.2	5.4	5.7	5.9	5.1	5.8	6.0	6.3	6.6	5.8	6.6	6.8	7.2	7.5	7.4	8.4	8.8	9.2	9.7	9.5	10.8	11.3	11.8	12.4
	20	4.2	4.7	5.0	5.2	5.4	4.7	5.3	5.5	5.8	6.1	5.3	6.1	6.3	6.6	7.0	6.9	7.8	8.2	8.6	9.0	8.9	10.1	10.6	11.1	11.6
	25	3.7	4.1	4.3	4.5	4.8	4.1	4.7	4.9	5.1	5.4	4.8	5.4	5.7	5.9	6.2	6.2	7.1	7.4	7.8	8.2	8.1	9.3	9.7	10.2	10.7
	30	2.9	3.3	3.5	3.7	3.8	3.4	3.8	4.0	4.2	4.4	4.0	4.5	4.7	5.0	5.2	5.4	6.1	6.4	6.7	7.0	7.1	8.1	8.5	8.9	9.4
	35	2.2	2.5	2.6	2.8	2.9	2.6	3.0	3.1	3.3	3.5	3.2	3.6	3.8	4.0	4.2	4.5	5.1	5.4	5.6	5.9	6.1	7.0	7.3	7.7	8.1
	40	1.5	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.4	2.5	2.4	2.8	2.9	3.1	3.2	3.6	4.2	4.4	4.6	4.8	5.1	5.9	6.2	6.5	6.8
	42	1.2	1.4	1.5	1.5	1.6	1.6	1.8	1.9	2.0	2.1	2.1	2.4	2.5	2.7	2.8	3.3	3.7	3.9	4.1	4.4	4.7	5.4	5.7	6.0	6.3
7	-35	7.1	8.1	8.4	8.8	9.3	7.8	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.3	10.6	12.1	12.6	13.2	13.9	13.0	14.8	15.5	16.2	17.1
0	-30	7.1	8.0	8.4	8.8	9.2	7.7	8.8	9.2	9.6	10.1	8.6	9.8	10.2	10.7	11.2	10.6	12.0	12.6	13.2	13.8	13.0	14.8	15.4	16.2	17.0
0	-25	7.1	8.0	8.3	8.7	9.1	7.7	8.7	9.1	9.5	10.0	8.6	9.7	10.1	10.6	11.1	10.6	11.9	12.5	13.1	13.7	13.0	14.7	15.3	16.1	16.9
0	-20	7.0	7.9	8.3	8.6	9.1	7.6	8.6	9.0	9.4	9.9	8.5	9.6	10.0	10.5	11.0	10.5	11.9	12.4	13.0	13.6	12.9	14.6	15.2	16.0	16.8
	-15	6.8	7.6	8.0	8.3	8.7	7.4	8.3	8.7	9.1	9.6	8.2	9.3	9.7	10.2	10.7	10.2	11.5	12.0	12.6	13.2	12.6	14.2	14.9	15.6	16.3
	-10	6.5	7.3	7.6	8.0	8.4	7.1	8.0	8.3	8.7	9.2	7.9	8.9	9.3	9.8	10.2	9.9	11.1	11.6	12.2	12.8	12.2	13.8	14.4	15.0	15.8
	-5	6.0	6.7	7.0	7.4	7.7	6.6	7.4	7.7	8.1	8.5	7.4	8.3	8.7	9.1	9.5	9.2	10.4	10.9	11.4	12.0	11.5	13.0	13.6	14.2	14.9
	0	5.4	6.1	6.4	6.7	7.0	6.0	6.8	7.1	7.4	7.8	6.8	7.6	8.0	8.4	8.8	8.5	9.7	10.1	10.6	11.1	10.7	12.1	12.7	13.3	14.0
	5	5.0	5.6	5.8	6.1	6.4	5.5	6.2	6.5	6.8	7.1	6.2	7.0	7.3	7.7	8.1	7.9	9.0	9.4	9.8	10.3	10.0	11.4	11.9	12.4	13.1
	10	4.5	5.1	5.3	5.5	5.8	5.0	5.7	5.9	6.2	6.5	5.7	6.4	6.7	7.1	7.4	7.3	8.3	8.7	9.1	9.5	9.4	10.6	11.1	11.6	12.2
	15	4.1	4.6	4.8	5.0	5.3	4.6	5.2	5.4	5.7	5.9	5.2	5.9	6.2	6.5	6.8	6.8	7.7	8.0	8.4	8.8	8.8	9.9	10.4	10.9	11.4
	20	3.7	4.1	4.3	4.5	4.8	4.1	4.7	4.9	5.1	5.4	4.8	5.4	5.7	5.9	6.2	6.3	7.1	7.4	7.8	8.2	8.2	9.3	9.7	10.2	10.7
	25	3.1	3.5	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.6	4.1	4.7	4.9	5.1	5.4	5.5	6.3	6.6	6.9	7.2	7.3	8.3	8.7	9.1	9.6
	30	2.4	2.7	2.9	3.0	3.1	2.8	3.2	3.4	3.5	3.7	3.4	3.9	4.1	4.3	4.5	4.7	5.4	5.6	5.9	6.2	6.4	7.3	7.6	8.0	8.4
	35	1.7	2.0	2.1	2.2	2.3	2.1	2.4	2.6	2.7	2.8	2.7	3.1	3.2	3.4	3.5	3.9	4.5	4.7	4.9	5.2	5.5	6.2	6.5	6.9	7.2
	40	1.0	1.2	1.3	1.4	1.4	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.5	2.6	3.1	3.6	3.7	3.9	4.1	4.6	5.2	5.5	5.7	6.0

525AFM-06-01

Figure 4-38 (Sheet 4)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		12375					12200					12000					11800					11600					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
8	-35	5.7	6.5	6.8	7.1	7.4	6.0	6.7	7.0	7.4	7.7	6.2	7.0	7.3	7.7	8.1	6.5	7.3	7.7	8.0	8.4	6.8	7.7	8.0	8.4	8.8	
0	-30	5.7	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.3	7.7	6.2	7.0	7.3	7.6	8.0	6.5	7.3	7.6	8.0	8.4	6.8	7.6	8.0	8.3	8.7	
0	-25	5.7	6.4	6.7	7.0	7.3	5.9	6.6	6.9	7.3	7.6	6.2	6.9	7.3	7.6	7.9	6.4	7.3	7.6	7.9	8.3	6.7	7.6	7.9	8.3	8.7	
0	-20	5.6	6.3	6.5	6.8	7.2	5.8	6.5	6.8	7.1	7.4	6.1	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.6	7.5	7.8	8.1	8.5	
	-15	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.2	5.9	6.6	6.9	7.2	7.5	6.1	6.9	7.2	7.5	7.9	
	-10	4.7	5.3	5.5	5.8	6.0	4.9	5.5	5.8	6.0	6.3	5.1	5.8	6.0	6.3	6.6	5.4	6.1	6.3	6.6	6.9	5.6	6.4	6.6	6.9	7.3	
	-5	4.2	4.7	4.9	5.2	5.4	4.4	4.9	5.2	5.4	5.6	4.6	5.2	5.4	5.7	6.0	4.9	5.5	5.7	6.0	6.3	5.1	5.8	6.0	6.3	6.6	
	0	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.8	5.0	4.1	4.7	4.9	5.1	5.3	4.4	4.9	5.2	5.4	5.6	4.6	5.2	5.4	5.7	6.0	
	5	3.3	3.7	3.9	4.1	4.3	3.5	3.9	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.8	5.1	4.2	4.7	4.9	5.1	5.4	
	10	2.9	3.3	3.4	3.6	3.7	3.1	3.5	3.6	3.8	4.0	3.3	3.7	3.9	4.0	4.2	3.5	4.0	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	
	15	2.5	2.8	3.0	3.1	3.3	2.7	3.0	3.2	3.3	3.5	2.9	3.3	3.4	3.6	3.8	3.1	3.5	3.7	3.8	4.0	3.3	3.8	3.9	4.1	4.3	
	20	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.8	3.0	2.5	2.8	2.9	3.1	3.2	2.7	3.0	3.2	3.3	3.5	2.9	3.3	3.4	3.6	3.8	
	25	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.9	3.0	
	30	1.0	1.2	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	2.0	2.1	2.2	2.3	
	35	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.8	0.9	1.0	1.0	0.9	1.0	1.1	1.2	1.2	1.1	1.2	1.3	1.4	1.5	
	37	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.7	0.8	0.9	0.9	1.0	
9	-35	5.5	6.3	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.4	6.0	6.8	7.1	7.4	7.8	6.3	7.1	7.4	7.8	8.1	6.6	7.4	7.8	8.1	8.5	
0	-30	5.4	6.1	6.4	6.6	7.0	5.6	6.3	6.6	6.9	7.2	5.9	6.6	6.9	7.2	7.6	6.1	6.9	7.2	7.6	7.9	6.4	7.3	7.6	7.9	8.3	
0	-25	5.3	5.9	6.2	6.5	6.8	5.5	6.2	6.4	6.7	7.0	5.7	6.5	6.7	7.1	7.4	6.0	6.8	7.1	7.4	7.7	6.3	7.1	7.4	7.7	8.1	
0	-20	5.0	5.6	5.9	6.1	6.4	5.2	5.9	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.0	5.7	6.4	6.7	7.0	7.3	6.0	6.7	7.0	7.3	7.7	
	-15	4.6	5.2	5.4	5.6	5.9	4.8	5.4	5.6	5.9	6.1	5.0	5.7	5.9	6.2	6.5	5.3	6.0	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	
	-10	4.1	4.7	4.9	5.1	5.3	4.3	4.9	5.1	5.3	5.6	4.6	5.2	5.4	5.6	5.9	4.8	5.4	5.7	5.9	6.2	5.1	5.7	6.0	6.2	6.5	
	-5	3.7	4.1	4.3	4.5	4.7	3.9	4.4	4.5	4.7	5.0	4.1	4.6	4.8	5.0	5.3	4.3	4.9	5.1	5.3	5.6	4.6	5.1	5.4	5.6	5.9	
	0	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.9	4.4	4.5	4.7	5.0	4.1	4.6	4.8	5.0	5.3	
	5	2.8	3.2	3.3	3.5	3.6	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.8	3.9	4.1	3.4	3.9	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	
	10	2.4	2.7	2.9	3.0	3.1	2.6	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.0	3.4	3.6	3.7	3.9	3.2	3.6	3.8	4.0	4.2	
	15	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.6	2.8	2.9	2.4	2.7	2.9	3.0	3.1	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7	
	20	1.6	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.6	2.7	2.8	2.3	2.7	2.8	2.9	3.1	
	25	1.1	1.3	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.9	1.9	2.0	2.2	1.8	2.1	2.2	2.3	2.4	
	30	0.6	0.7	0.8	0.8	0.9	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.3	1.5	1.5	1.6	1.7	
	35	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.9	
1	-35	5.3	5.9	6.2	6.5	6.8	5.5	6.2	6.4	6.7	7.1	5.7	6.5	6.7	7.1	7.4	6.0	6.8	7.1	7.4	7.7	6.3	7.1	7.4	7.7	8.1	
0	-30	5.1	5.7	6.0	6.2	6.5	5.3	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.4	6.1	6.8	7.1	7.4	7.8	
0	-25	4.9	5.5	5.7	6.0	6.2	5.1	5.7	6.0	6.2	6.5	5.3	6.0	6.2	6.5	6.8	5.6	6.3	6.5	6.8	7.2	5.8	6.6	6.9	7.2	7.5	
0	-20	4.5	5.0	5.2	5.5	5.7	4.7	5.2	5.5	5.7	6.0	4.9	5.5	5.8	6.0	6.3	5.2	5.8	6.0	6.3	6.6	5.4	6.1	6.4	6.6	6.9	
0	-15	4.0	4.6	4.8	5.0	5.2	4.2	4.8	5.0	5.2	5.4	4.5	5.0	5.3	5.5	5.7	4.7	5.3	5.5	5.8	6.1	5.0	5.6	5.8	6.1	6.4	
	-10	3.6	4.1	4.3	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	5.0	5.2	4.3	4.8	5.0	5.2	5.5	4.5	5.1	5.3	5.5	5.8	
	-5	3.2	3.6	3.7	3.9	4.1	3.3	3.8	3.9	4.1	4.3	3.6	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	4.9	5.2	
	0	2.7	3.1	3.2	3.4	3.5	2.9	3.3	3.4	3.6	3.8	3.1	3.5	3.7	3.9	4.0	3.3	3.8	3.9	4.1	4.3	3.6	4.0	4.2	4.4	4.6	
	5	2.3	2.6	2.8	2.9	3.0	2.5	2.8	3.0	3.1	3.2	2.7	3.1	3.2	3.3	3.5	2.9	3.3	3.4	3.6	3.8	3.1	3.5	3.7	3.9	4.1	
	10	2.0	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.7	2.8	2.3	2.6	2.8	2.9	3.0	2.5	2.9	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.6	
	15	1.6	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.7	2.8	2.3	2.7	2.8	2.9	3.1	
	20	1.1	1.3	1.4	1.5	1.5	1.3	1.5	1.6	1.7	1.7	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.1	2.2	1.9	2.1	2.2	2.3	2.5	
	25	0.7	0.8	0.9	0.9	1.0	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.4	1.6	1.7	1.7	1.8	
	30	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	1.0	0.8	1.0	1.0	1.1	1.2	
	33	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	
1	-35	4.8	5.4	5.6	5.9	6.2	5.0	5.6	5.9	6.1	6.4	5.3	5.9	6.2	6.4	6.7	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.4	
1	-30	4.6	5.2	5.4	5.6	5.9	4.8	5.4	5.6	5.9	6.2	5.1	5.7	5.9	6.2	6.5	5.3	6.0	6.2	6.5	6.8	5.6	6.3	6.5	6.8	7.1	
0	-25	4.3	4.9	5.1	5.3	5.5	4.5	5.1	5.3	5.6	5.8	4.8	5.4	5.6	5.8	6.1	5.0	5.6	5.9	6.1	6.4	5.3	5.9	6.2	6.5	6.8	
0	-20	3.9	4.4	4.6	4.8	5.0	4.1	4.6	4.8	5.0	5.3	4.4	4.9	5.1	5.3	5.6	4.6	5.2	5.4	5.6	5.9	4.8	5.4	5.7	5.9	6.2	
0	-15	3.5	4.0	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.8	5.1	4.2	4.7	4.9	5.1	5.3	4.4	5.0	5.2	5.4	5.7	
	-10	3.1	3.5	3.7	3.8	4.0	3.3	3.7	3.9	4.1	4.2	3.5	4.0	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	4.0	4.5	4.7	4.9	5.1	
	-5	2.7	3.0	3.2	3.3	3.5	2.8	3.2	3.4	3.5	3.7	3.1	3.5	3.6	3.8	3.9	3.3	3.7	3.9	4.0	4.2	3.5	3.9	4.1	4.3	4.5	
	0	2.3	2.6	2.7	2.8	2.9	2.4	2.8	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	3.1	3.5	3.6	3.8	4.0	
	5	1.9	2.1	2.2	2.4	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	2.9	2.4	2.8	2.9	3.0	3.2	2.7	3.0	3.1	3.3	3.4	
	10	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.1	2.2	1.9	2.1	2.2	2.3	2.5	2.1	2.3	2.5	2.6	2.7	2.3	2.6	2.7	2.8	3.0	
	15	1.1	1.3	1.4	1.5	1.5	1.3	1.5	1.6	1.6	1.7	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	
	20	0.7	0.8	0.9	1.0	1.0	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.5	1.6	1.6	1.4	1.6	1.7	1.8	1.9	
	25	0.3	0.4	0.4	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.3	
	30	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	
	31	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	

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Figure 4-38 (Sheet 5)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS					11000 WIND KNOTS					10500 WIND KNOTS					9500 WIND KNOTS					8500 WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
8	-35	7.1	8.0	8.4	8.8	9.2	7.7	8.7	9.1	9.6	10.0	8.6	9.7	10.2	10.6	11.2	10.6	12.0	12.5	13.1	13.8	13.0	14.7	15.4	16.1	17.0
0	-30	7.1	8.0	8.3	8.7	9.1	7.7	8.7	9.1	9.5	10.0	8.6	9.7	10.1	10.6	11.1	10.6	11.9	12.5	13.0	13.7	13.0	14.7	15.3	16.1	16.9
0	-25	7.0	7.9	8.3	8.6	9.1	7.7	8.6	9.0	9.4	9.9	8.5	9.6	10.0	10.5	11.0	10.5	11.9	12.4	13.0	13.6	12.9	14.6	15.3	16.0	16.8
0	-20	6.9	7.8	8.1	8.5	8.9	7.5	8.5	8.9	9.3	9.7	8.4	9.5	9.9	10.3	10.8	10.4	11.7	12.2	12.8	13.4	12.8	14.4	15.1	15.8	16.5
	-15	6.4	7.2	7.6	7.9	8.3	7.0	7.9	8.3	8.6	9.1	7.9	8.9	9.3	9.7	10.1	9.8	11.0	11.5	12.1	12.6	12.1	13.7	14.3	15.0	15.7
	-10	5.9	6.7	7.0	7.3	7.6	6.5	7.3	7.7	8.0	8.4	7.3	8.2	8.6	9.0	9.4	9.2	10.4	10.8	11.3	11.9	11.4	12.9	13.5	14.1	14.8
	-5	5.4	6.1	6.3	6.6	6.9	5.9	6.7	7.0	7.3	7.7	6.7	7.6	7.9	8.3	8.7	8.5	9.6	10.0	10.5	11.0	10.7	12.1	12.6	13.2	13.8
	0	4.9	5.5	5.7	6.0	6.3	5.4	6.1	6.4	6.7	7.0	6.1	6.9	7.2	7.6	7.9	7.8	8.9	9.3	9.7	10.2	9.9	11.3	11.8	12.3	12.9
	5	4.4	5.0	5.2	5.4	5.7	4.9	5.6	5.8	6.1	6.4	5.6	6.4	6.6	6.9	7.3	7.2	8.2	8.6	9.0	9.4	9.3	10.5	11.0	11.5	12.1
	10	4.0	4.5	4.7	4.9	5.1	4.5	5.0	5.3	5.5	5.8	5.1	5.8	6.1	6.3	6.6	6.7	7.6	7.9	8.3	8.7	8.6	9.8	10.2	10.7	11.3
	15	3.6	4.0	4.2	4.4	4.6	4.0	4.6	4.8	5.0	5.2	4.7	5.3	5.5	5.8	6.1	6.2	7.0	7.3	7.6	8.0	8.1	9.1	9.6	10.0	10.5
	20	3.1	3.5	3.7	3.9	4.0	3.6	4.1	4.2	4.4	4.6	4.2	4.8	5.0	5.2	5.5	5.6	6.4	6.7	7.0	7.3	7.4	8.4	8.8	9.2	9.7
	25	2.5	2.9	3.0	3.1	3.3	2.9	3.4	3.5	3.7	3.9	3.6	4.0	4.2	4.4	4.6	4.9	5.6	5.8	6.1	6.4	6.6	7.5	7.8	8.2	8.6
	30	1.9	2.2	2.3	2.4	2.5	2.3	2.6	2.8	2.9	3.1	2.9	3.3	3.4	3.6	3.8	4.2	4.7	5.0	5.2	5.5	5.7	6.5	6.8	7.2	7.5
	35	1.2	1.5	1.5	1.6	1.7	1.6	1.9	2.0	2.1	2.2	2.2	2.5	2.6	2.8	2.9	3.4	3.9	4.1	4.3	4.5	4.9	5.6	5.8	6.1	6.4
	37	0.8	1.0	1.1	1.1	1.2	1.2	1.4	1.5	1.6	1.7	1.7	2.0	2.1	2.2	2.4	2.9	3.3	3.5	3.7	3.9	4.3	5.0	5.2	5.4	5.7
9	-35	6.9	7.8	8.1	8.5	8.9	7.5	8.5	8.8	9.3	9.7	8.4	9.4	9.9	10.3	10.8	10.3	11.7	12.2	12.8	13.4	12.7	14.4	15.0	15.7	16.5
0	-30	6.7	7.6	7.9	8.3	8.7	7.3	8.3	8.7	9.0	9.5	8.2	9.2	9.7	10.1	10.6	10.2	11.5	12.0	12.5	13.1	12.5	14.2	14.8	15.5	16.2
0	-25	6.6	7.4	7.7	8.1	8.5	7.2	8.1	8.5	8.8	9.3	8.0	9.1	9.5	9.9	10.4	10.0	11.2	11.7	12.3	12.9	12.3	13.9	14.5	15.2	16.0
0	-20	6.2	7.0	7.4	7.7	8.0	6.8	7.7	8.1	8.4	8.8	7.7	8.7	9.0	9.4	9.9	9.6	10.8	11.3	11.8	12.4	11.9	13.4	14.0	14.7	15.4
	-15	5.8	6.5	6.8	7.1	7.5	6.4	7.2	7.5	7.9	8.2	7.2	8.1	8.5	8.8	9.3	9.0	10.2	10.6	11.1	11.7	11.3	12.8	13.3	14.0	14.6
	-10	5.3	6.0	6.3	6.5	6.9	5.9	6.6	6.9	7.2	7.6	6.6	7.5	7.8	8.2	8.6	8.4	9.5	9.9	10.4	10.9	10.6	12.0	12.5	13.1	13.8
	-5	4.8	5.4	5.7	5.9	6.2	5.3	6.0	6.3	6.6	6.9	6.1	6.8	7.2	7.5	7.8	7.8	8.8	9.2	9.6	10.1	9.9	11.2	11.7	12.2	12.8
	0	4.3	4.9	5.1	5.3	5.6	4.8	5.5	5.7	6.0	6.2	5.5	6.3	6.5	6.8	7.2	7.2	8.1	8.5	8.9	9.3	9.2	10.4	10.9	11.4	12.0
	5	3.9	4.4	4.6	4.8	5.0	4.4	4.9	5.2	5.4	5.6	5.0	5.7	5.9	6.2	6.5	6.6	7.5	7.8	8.2	8.6	8.6	9.7	10.1	10.6	11.1
	10	3.5	3.9	4.1	4.3	4.5	3.9	4.4	4.6	4.9	5.1	4.6	5.2	5.4	5.7	5.9	6.1	6.9	7.2	7.5	7.9	7.9	9.0	9.4	9.9	10.3
	15	3.0	3.5	3.6	3.8	4.0	3.5	4.0	4.2	4.3	4.5	4.1	4.7	4.9	5.1	5.4	5.6	6.3	6.6	6.9	7.2	7.4	8.3	8.7	9.1	9.6
	20	2.6	2.9	3.0	3.2	3.3	3.0	3.4	3.6	3.7	3.9	3.6	4.1	4.3	4.5	4.7	5.0	5.7	5.9	6.2	6.5	6.7	7.6	7.9	8.3	8.7
	25	2.0	2.3	2.4	2.5	2.7	2.4	2.8	2.9	3.0	3.2	3.0	3.4	3.6	3.7	3.9	4.3	4.9	5.1	5.4	5.6	5.9	6.7	7.0	7.4	7.7
	30	1.4	1.7	1.8	1.9	2.0	1.9	2.1	2.2	2.4	2.5	2.4	2.7	2.9	3.0	3.2	3.7	4.2	4.4	4.6	4.8	5.2	5.9	6.1	6.4	6.8
	35	0.8	0.9	1.0	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.7	1.9	2.0	2.2	2.3	2.9	3.3	3.4	3.6	3.8	4.3	4.9	5.1	5.4	5.6
1	-35	6.6	7.4	7.7	8.1	8.5	7.2	8.1	8.5	8.8	9.3	8.0	9.1	9.5	9.9	10.4	10.0	11.2	11.7	12.3	12.9	12.3	13.9	14.5	15.2	16.0
0	-30	6.3	7.1	7.5	7.8	8.2	6.9	7.8	8.2	8.5	8.9	7.8	8.8	9.2	9.6	10.0	9.7	10.9	11.4	11.9	12.5	12.0	13.6	14.2	14.8	15.5
0	-25	6.1	6.9	7.2	7.5	7.9	6.7	7.6	7.9	8.2	8.6	7.5	8.5	8.9	9.3	9.7	9.4	10.6	11.1	11.6	12.1	11.7	13.2	13.8	14.4	15.1
0	-20	5.7	6.4	6.7	7.0	7.3	6.2	7.0	7.3	7.7	8.0	7.0	7.9	8.3	8.6	9.0	8.9	10.0	10.4	10.9	11.4	11.1	12.5	13.1	13.7	14.4
0	-15	5.2	5.9	6.1	6.4	6.7	5.8	6.5	6.8	7.1	7.4	6.5	7.3	7.7	8.0	8.4	8.3	9.4	9.8	10.2	10.7	10.5	11.8	12.4	12.9	13.6
	-10	4.8	5.4	5.6	5.8	6.1	5.3	6.0	6.2	6.5	6.8	6.0	6.8	7.1	7.4	7.7	7.7	8.7	9.1	9.5	10.0	9.9	11.1	11.6	12.2	12.7
	-5	4.3	4.8	5.0	5.2	5.5	4.8	5.4	5.6	5.9	6.1	5.5	6.2	6.4	6.7	7.0	7.1	8.0	8.4	8.8	9.2	9.1	10.3	10.8	11.3	11.8
	0	3.8	4.3	4.5	4.7	4.9	4.3	4.8	5.1	5.3	5.5	5.0	5.6	5.8	6.1	6.4	6.5	7.4	7.7	8.1	8.4	8.5	9.6	10.0	10.5	11.0
	5	3.4	3.8	4.0	4.1	4.3	3.8	4.3	4.5	4.7	4.9	4.5	5.1	5.3	5.5	5.8	6.0	6.8	7.1	7.4	7.7	7.8	8.9	9.3	9.7	10.2
	10	3.0	3.3	3.5	3.7	3.8	3.4	3.9	4.0	4.2	4.4	4.0	4.6	4.8	5.0	5.2	5.5	6.2	6.5	6.8	7.1	7.3	8.2	8.6	9.0	9.4
	15	2.6	2.9	3.0	3.2	3.3	3.0	3.4	3.6	3.7	3.9	3.6	4.1	4.3	4.5	4.7	5.0	5.7	5.9	6.2	6.5	6.7	7.6	7.9	8.3	8.7
	20	2.1	2.3	2.5	2.6	2.7	2.5	2.8	3.0	3.1	3.3	3.1	3.5	3.6	3.8	4.0	4.4	5.0	5.2	5.5	5.7	6.0	6.8	7.1	7.5	7.8
	25	1.6	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.6	2.5	2.9	3.0	3.2	3.3	3.8	4.3	4.5	4.7	5.0	5.3	6.1	6.3	6.6	7.0
	30	1.0	1.2	1.2	1.3	1.4	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.4	2.6	3.1	3.6	3.7	3.9	4.1	4.6	5.2	5.5	5.7	6.0
	33	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.5	2.9	3.0	3.2	3.4	3.9	4.5	4.7	4.9	5.2
1	-35	6.0	6.8	7.1	7.4	7.8	6.6	7.5	7.8	8.1	8.5	7.4	8.4	8.7	9.1	9.6	9.3	10.5	11.0	11.5	12.0	11.6	13.1	13.7	14.3	15.0
1	-30	5.8	6.6	6.8	7.2	7.5	6.4	7.2	7.5	7.9	8.2	7.2	8.1	8.5	8.8	9.3	9.1	10.2	10.7	11.1	11.7	11.3	12.8	13.3	13.9	14.6
0	-25	5.5	6.2	6.5	6.8	7.1	6.1	6.9	7.2	7.5	7.8	6.9	7.7	8.1	8.4	8.8	8.7	9.8	10.2	10.7	11.2	10.9	12.3	12.9	13.4	14.1
0	-20	5.1	5.7	6.0	6.2	6.5	5.6	6.3	6.6	6.9	7.2	6.4	7.2	7.5	7.8	8.2	8.1	9.2	9.6	10.0	10.5	10.3	11.6	12.1	12.7	13.3
0	-15	4.7	5.2	5.5	5.7	6.0	5.2	5.8	6.1	6.4	6.7	5.9	6.6	6.9	7.2	7.6	7.6	8.6	8.9	9.3	9.8	9.7	11.0	11.4	12.0	12.5
	-10	4.2	4.7	5.0	5.2	5.4	4.7	5.3	5.5	5.8	6.1	5.4	6.1	6.4	6.6	7.0	7.0	7.9	8.3	8.7	9.1	9.1	10.3	10.7	11.2	11.8
	-5	3.7	4.2	4.4	4.6	4.8	4.2	4.8	5.0	5.2	5.4	4.9	5.5	5.8	6.0	6.3	6.4	7.3	7.6	7.9	8.3	8.4	9.5	9.9	10.4	10.9
	0	3.3	3.7	3.9	4.1	4.2	3.8	4.2	4.4	4.6	4.8	4.4	5.0	5.2	5.4	5.7	5.9	6.7	6.9	7.3	7.6	7.8	8.8	9.2	9.6	10.1
	5	2.9	3.2	3.4	3.5	3.7	3.3	3.8	3.9	4.1	4.3	4.0	4.5	4.7	4.9	5.1	5.4	6.1	6.4	6.7	7.0	7.2	8.1	8.5	8.9	9.3
	10	2.5	2.8	2.9	3.1	3.2	2.9	3.3	3.5	3.6	3.8	3.5	4.0	4.2	4.3	4.6	4.9	5.6	5.8	6.1	6.4	6.6	7.5	7.8	8.2	8.6
	15	2.1	2.3	2.5	2.6	2.7	2.5	2.8	2.9	3.1	3.2	3.1	3.5	3.6	3.8	4.0	4.4	5.0	5.2	5.4	5.7	6.0	6.8	7.1	7.5	7.8
	20	1.6	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.6	2.6	2.9	3.0	3.2	3.3	3.9	4.4	4.6	4.8	5.0	5.4	6.1	6.4	6.7	7.0
	25	1.1	1.3	1.4	1.5	1.6	1.5	1.8	1.9	1.9	2.1	2.1	2.4	2.5	2.6	2.7	3.3	3.7	3.9	4.1	4.3	4.8	5.4	5.7	5.9	6.2
	30	0.5	0.7	0.7	0.8	0.8	0.9	1.1	1.1	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.6	2.9	3.1	3.2	3.4	4.0	4.5	4.7	5.0	5.2
	31	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.2	1.4	1.5	1.6	1.6	2.3	2.7	2.8	2.9	3.1	3.7	4.2	4.4	4.6	4.9

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Figure 4-38 (Sheet 6)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		12375					12200					12000					11800					11600					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
1	-35	4.3	4.9	5.1	5.3	5.5	4.5	5.1	5.3	5.5	5.8	4.8	5.3	5.6	5.8	6.1	5.0	5.6	5.9	6.1	6.4	5.2	5.9	6.2	6.4	6.7	
2	-30	4.1	4.7	4.9	5.1	5.3	4.3	4.9	5.1	5.3	5.6	4.6	5.1	5.4	5.6	5.9	4.8	5.4	5.6	5.9	6.2	5.1	5.7	5.9	6.2	6.5	
0	-25	3.8	4.3	4.5	4.6	4.9	4.0	4.5	4.7	4.9	5.1	4.2	4.7	4.9	5.2	5.4	4.5	5.0	5.2	5.5	5.7	4.7	5.3	5.5	5.8	6.0	
0	-20	3.4	3.8	4.0	4.2	4.4	3.6	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	4.9	5.2	4.3	4.8	5.0	5.2	5.5	
0	-15	3.0	3.4	3.6	3.7	3.9	3.2	3.6	3.8	3.9	4.1	3.4	3.9	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.9	4.4	4.5	4.7	5.0	
	-10	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.4	3.6	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.8	4.0	4.1	3.4	3.9	4.0	4.2	4.4	
	-5	2.2	2.5	2.6	2.7	2.9	2.4	2.7	2.8	2.9	3.1	2.6	2.9	3.0	3.2	3.3	2.8	3.1	3.3	3.4	3.6	3.0	3.4	3.5	3.7	3.9	
	0	1.8	2.1	2.1	2.3	2.4	2.0	2.2	2.3	2.5	2.6	2.2	2.5	2.6	2.7	2.8	2.4	2.7	2.8	2.9	3.1	2.6	2.9	3.0	3.2	3.3	
	5	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.8	2.0	2.1	2.2	2.3	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.8	
	10	1.1	1.3	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.8	2.1	2.1	2.3	2.4	
	15	0.7	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.5	1.6	1.6	1.4	1.6	1.7	1.8	1.9	
	20	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	0.9	0.8	1.0	1.0	1.1	1.1	1.0	1.2	1.2	1.3	1.4	
	25	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	
	29	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.1	
1	-35	3.4	3.8	4.0	4.2	4.4	3.6	4.1	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.1	4.6	4.8	5.0	5.2	4.3	4.8	5.0	5.3	5.5	
4	-30	3.2	3.5	3.7	3.9	4.0	3.3	3.8	3.9	4.1	4.3	3.6	4.0	4.2	4.3	4.5	3.8	4.2	4.4	4.6	4.8	4.0	4.5	4.7	4.9	5.1	
0	-25	2.8	3.1	3.3	3.4	3.6	2.9	3.3	3.5	3.6	3.8	3.2	3.6	3.7	3.9	4.0	3.4	3.8	4.0	4.1	4.3	3.6	4.1	4.2	4.4	4.6	
0	-20	2.4	2.7	2.8	3.0	3.1	2.6	2.9	3.0	3.2	3.3	2.8	3.1	3.3	3.4	3.6	3.0	3.4	3.5	3.7	3.8	3.2	3.6	3.8	3.9	4.1	
0	-15	2.0	2.3	2.4	2.5	2.7	2.2	2.5	2.6	2.7	2.9	2.4	2.7	2.9	3.0	3.1	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	
	-10	1.7	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.8	2.9	2.4	2.8	2.9	3.0	3.2	
	-5	1.3	1.5	1.6	1.6	1.7	1.4	1.7	1.7	1.8	1.9	1.6	1.9	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	
	0	0.9	1.1	1.1	1.2	1.3	1.1	1.2	1.3	1.4	1.5	1.3	1.4	1.5	1.6	1.7	1.4	1.7	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2	
	5	0.6	0.7	0.7	0.8	0.9	0.7	0.9	0.9	1.0	1.0	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.3	1.5	1.5	1.6	1.7	
	10	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3	
	15	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	
	20	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	
	25	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	
1	-35	2.5	2.8	2.9	3.0	3.2	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.1	3.4	3.6	3.7	3.9	3.3	3.7	3.8	4.0	4.2	
6	-30	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.8	3.0	2.5	2.8	3.0	3.1	3.2	2.7	3.1	3.2	3.3	3.5	2.9	3.3	3.4	3.6	3.7	
0	-25	1.8	2.1	2.2	2.3	2.4	2.0	2.2	2.3	2.4	2.6	2.2	2.5	2.6	2.7	2.8	2.4	2.7	2.8	2.9	3.0	2.6	2.9	3.0	3.2	3.3	
0	-20	1.5	1.7	1.8	1.8	1.9	1.6	1.9	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.9	
0	-15	1.1	1.3	1.4	1.5	1.5	1.3	1.5	1.6	1.6	1.7	1.5	1.7	1.8	1.9	1.9	1.7	1.9	2.0	2.1	2.2	1.9	2.1	2.2	2.3	2.4	
	-10	0.8	0.9	1.0	1.1	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.4	1.5	1.3	1.5	1.6	1.7	1.7	1.5	1.7	1.8	1.9	2.0	
	-5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.4	1.4	1.5	
	0	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1	
	5	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	
	10	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	
	15	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	
	20	-1.2	-1.2	-1.2	-1.2	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	
1	-35	1.5	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.9	
8	-30	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.8	1.6	1.8	1.9	2.0	2.1	1.8	2.0	2.1	2.2	2.3	2.0	2.2	2.3	2.4	2.5	
0	-25	0.9	1.1	1.1	1.2	1.3	1.1	1.2	1.3	1.4	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	
0	-20	0.6	0.7	0.8	0.8	0.9	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.3	1.5	1.5	1.6	1.7	
0	-15	0.3	0.4	0.4	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.2	1.3	
	-10	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	
	-5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	
	0	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	
	5	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3	
	10	-1.3	-1.3	-1.3	-1.3	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	
	15	-1.5	-1.6	-1.6	-1.6	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.3	-1.3	-1.3	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	
	16	-1.6	-1.7	-1.7	-1.7	-1.8	-1.5	-1.6	-1.6	-1.6	-1.6	-1.4	-1.4	-1.4	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	

525AFM-06-01

Figure 4-38 (Sheet 7)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		11400					11000					10500					9500					8500					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
1	-35	5.5	6.2	6.5	6.8	7.1	6.1	6.8	7.1	7.4	7.8	6.8	7.7	8.0	8.4	8.8	8.7	9.8	10.2	10.6	11.1	10.9	12.3	12.8	13.4	14.0	
2	-30	5.3	6.0	6.2	6.5	6.8	5.9	6.6	6.9	7.2	7.5	6.6	7.5	7.8	8.1	8.5	8.4	9.5	9.9	10.4	10.8	10.6	12.0	12.5	13.1	13.7	
0	-25	5.0	5.6	5.8	6.1	6.3	5.5	6.2	6.4	6.7	7.0	6.2	7.0	7.3	7.6	8.0	8.0	9.0	9.4	9.8	10.2	10.1	11.4	11.9	12.4	13.0	
0	-20	4.5	5.1	5.3	5.5	5.8	5.0	5.7	5.9	6.2	6.5	5.7	6.5	6.7	7.0	7.4	7.4	8.4	8.7	9.1	9.5	9.5	10.7	11.2	11.7	12.3	
0	-15	4.1	4.6	4.8	5.0	5.3	4.6	5.2	5.4	5.7	5.9	5.3	6.0	6.2	6.5	6.8	6.9	7.8	8.1	8.5	8.9	8.9	10.1	10.5	11.0	11.5	
	-10	3.7	4.1	4.3	4.5	4.7	4.2	4.7	4.9	5.1	5.3	4.8	5.4	5.7	5.9	6.2	6.4	7.2	7.5	7.8	8.2	8.3	9.4	9.8	10.3	10.8	
	-5	3.2	3.6	3.8	4.0	4.1	3.7	4.2	4.3	4.5	4.7	4.3	4.9	5.1	5.3	5.6	5.8	6.6	6.8	7.2	7.5	7.7	8.7	9.1	9.5	10.0	
	0	2.8	3.2	3.3	3.4	3.6	3.2	3.7	3.8	4.0	4.2	3.9	4.4	4.5	4.8	5.0	5.3	6.0	6.2	6.5	6.8	7.1	8.0	8.4	8.7	9.2	
	5	2.4	2.7	2.8	3.0	3.1	2.8	3.2	3.3	3.5	3.7	3.4	3.9	4.0	4.2	4.4	4.8	5.4	5.7	5.9	6.2	6.5	7.4	7.7	8.1	8.4	
	10	2.0	2.3	2.4	2.5	2.6	2.4	2.8	2.9	3.0	3.2	3.0	3.4	3.5	3.7	3.9	4.3	4.9	5.1	5.4	5.6	6.0	6.8	7.1	7.4	7.7	
	15	1.6	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.6	2.6	2.9	3.0	3.2	3.3	3.8	4.3	4.5	4.8	5.0	5.4	6.1	6.4	6.7	7.0	
	20	1.2	1.4	1.4	1.5	1.6	1.6	1.8	1.9	2.0	2.1	2.1	2.4	2.5	2.6	2.8	3.3	3.8	4.0	4.1	4.3	4.9	5.5	5.7	6.0	6.3	
	25	0.7	0.9	0.9	1.0	1.1	1.1	1.3	1.4	1.4	1.5	1.6	1.9	2.0	2.1	2.2	2.8	3.2	3.3	3.5	3.7	4.3	4.8	5.1	5.3	5.6	
	29	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.2	1.3	1.4	2.1	2.4	2.5	2.7	2.8	3.5	4.0	4.2	4.4	4.6	
1	-35	4.5	5.1	5.3	5.6	5.8	5.1	5.7	5.9	6.2	6.5	5.8	6.5	6.8	7.1	7.4	7.4	8.4	8.7	9.1	9.5	9.5	10.7	11.2	11.7	12.3	
4	-30	4.2	4.8	5.0	5.2	5.4	4.8	5.3	5.6	5.8	6.1	5.4	6.1	6.4	6.7	7.0	7.1	8.0	8.3	8.7	9.1	9.1	10.3	10.7	11.2	11.7	
0	-25	3.8	4.3	4.5	4.7	4.9	4.3	4.9	5.1	5.3	5.5	5.0	5.6	5.9	6.1	6.4	6.6	7.4	7.7	8.0	8.4	8.6	9.6	10.1	10.5	11.0	
0	-20	3.4	3.9	4.0	4.2	4.4	3.9	4.4	4.6	4.8	5.0	4.6	5.1	5.4	5.6	5.8	6.1	6.8	7.1	7.4	7.8	8.0	9.0	9.4	9.8	10.3	
0	-15	3.1	3.4	3.6	3.8	3.9	3.5	4.0	4.1	4.3	4.5	4.2	4.7	4.9	5.1	5.3	5.6	6.3	6.6	6.9	7.2	7.5	8.4	8.8	9.2	9.6	
	-10	2.6	3.0	3.1	3.3	3.4	3.1	3.5	3.6	3.8	4.0	3.7	4.2	4.4	4.6	4.8	5.1	5.8	6.0	6.3	6.6	6.9	7.8	8.1	8.5	8.9	
	-5	2.2	2.5	2.6	2.8	2.9	2.7	3.0	3.1	3.3	3.4	3.2	3.7	3.8	4.0	4.2	4.6	5.2	5.4	5.7	5.9	6.3	7.1	7.4	7.8	8.1	
	0	1.8	2.1	2.2	2.3	2.4	2.3	2.6	2.7	2.8	2.9	2.8	3.2	3.3	3.5	3.6	4.1	4.7	4.9	5.1	5.3	5.8	6.5	6.8	7.1	7.5	
	5	1.5	1.7	1.8	1.8	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.7	2.9	3.0	3.1	3.7	4.2	4.4	4.6	4.8	5.3	5.9	6.2	6.5	6.8	
	10	1.1	1.3	1.3	1.4	1.5	1.5	1.7	1.8	1.9	2.0	2.0	2.3	2.4	2.5	2.7	3.3	3.7	3.9	4.0	4.2	4.8	5.4	5.6	5.9	6.2	
	15	0.8	0.9	1.0	1.0	1.1	1.1	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.1	2.2	2.8	3.2	3.4	3.5	3.7	4.3	4.9	5.1	5.3	5.6	
	20	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.3	1.5	1.6	1.6	1.7	2.4	2.8	2.9	3.0	3.2	3.9	4.4	4.6	4.8	5.0	
	25	-0.2	-0.1	-0.1	-0.1	-0.1	0.1	0.2	0.3	0.3	0.3	0.6	0.8	0.8	0.9	0.9	1.7	2.0	2.1	2.2	2.3	3.0	3.5	3.6	3.8	4.0	
1	-35	3.5	3.9	4.1	4.3	4.5	4.0	4.5	4.7	4.9	5.1	4.6	5.2	5.4	5.6	5.9	6.1	6.9	7.2	7.5	7.8	8.0	9.1	9.5	9.9	10.3	
6	-30	3.1	3.5	3.7	3.9	4.0	3.6	4.1	4.2	4.4	4.6	4.2	4.8	5.0	5.2	5.4	5.7	6.4	6.7	7.0	7.3	7.6	8.5	8.9	9.3	9.7	
0	-25	2.8	3.1	3.3	3.4	3.6	3.2	3.6	3.8	4.0	4.1	3.9	4.3	4.5	4.7	4.9	5.3	5.9	6.2	6.5	6.8	7.1	8.0	8.3	8.7	9.1	
0	-20	2.4	2.7	2.9	3.0	3.1	2.9	3.2	3.4	3.5	3.7	3.5	3.9	4.1	4.2	4.4	4.8	5.4	5.7	5.9	6.2	6.6	7.4	7.7	8.1	8.4	
0	-15	2.1	2.3	2.4	2.6	2.7	2.5	2.8	2.9	3.1	3.2	3.1	3.5	3.6	3.8	3.9	4.4	5.0	5.2	5.4	5.6	6.1	6.8	7.1	7.5	7.8	
	-10	1.7	1.9	2.0	2.1	2.2	2.1	2.4	2.5	2.6	2.7	2.7	3.0	3.1	3.3	3.4	4.0	4.5	4.7	4.9	5.1	5.6	6.3	6.6	6.9	7.2	
	-5	1.3	1.5	1.6	1.7	1.7	1.7	1.9	2.0	2.1	2.2	2.2	2.5	2.7	2.8	2.9	3.5	4.0	4.1	4.3	4.5	5.1	5.7	5.9	6.2	6.5	
	0	0.9	1.1	1.2	1.2	1.3	1.3	1.5	1.6	1.7	1.8	1.8	2.1	2.2	2.3	2.4	3.1	3.5	3.6	3.8	4.0	4.6	5.1	5.4	5.6	5.9	
	5	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.5	1.7	1.8	1.9	1.9	2.6	3.0	3.1	3.3	3.4	4.1	4.6	4.8	5.0	5.3	
	10	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.1	1.3	1.4	1.4	1.5	2.2	2.6	2.7	2.8	2.9	3.7	4.1	4.3	4.5	4.7	
	15	-0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.4	0.5	0.5	0.8	0.9	1.0	1.0	1.1	1.9	2.1	2.2	2.3	2.5	3.2	3.6	3.8	4.0	4.2	
	20	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	-0.1	0.0	0.0	0.0	0.3	0.4	0.5	0.5	0.6	1.4	1.6	1.7	1.8	1.9	2.7	3.1	3.2	3.4	3.5	
1	-35	2.4	2.7	2.9	3.0	3.1	2.9	3.2	3.4	3.5	3.7	3.5	3.9	4.1	4.2	4.4	4.8	5.4	5.7	5.9	6.2	6.5	7.4	7.7	8.0	8.4	
8	-30	2.2	2.5	2.6	2.7	2.8	2.6	2.9	3.1	3.2	3.3	3.2	3.6	3.7	3.9	4.1	4.5	5.1	5.3	5.5	5.8	6.2	7.0	7.3	7.6	7.9	
0	-25	1.8	2.1	2.2	2.3	2.4	2.2	2.5	2.6	2.7	2.9	2.8	3.1	3.3	3.4	3.6	4.1	4.6	4.8	5.0	5.2	5.7	6.4	6.7	7.0	7.3	
0	-20	1.5	1.7	1.8	1.8	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.7	2.9	3.0	3.1	3.7	4.2	4.3	4.5	4.7	5.3	5.9	6.2	6.4	6.7	
0	-15	1.1	1.3	1.4	1.5	1.5	1.5	1.7	1.8	1.9	2.0	2.1	2.3	2.4	2.6	2.7	3.3	3.7	3.9	4.0	4.2	4.8	5.4	5.7	5.9	6.2	
	-10	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.1	2.2	2.9	3.3	3.4	3.5	3.7	4.4	4.9	5.1	5.3	5.6	
	-5	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.3	1.5	1.6	1.6	1.7	2.5	2.8	2.9	3.0	3.2	3.9	4.4	4.6	4.8	5.0	
	0	0.1	0.2	0.2	0.2	0.2	0.4	0.5	0.6	0.6	0.7	0.9	1.1	1.1	1.2	1.3	2.0	2.3	2.4	2.5	2.7	3.4	3.8	4.0	4.2	4.4	
	5	-0.2	-0.2	-0.2	-0.1	-0.1	0.1	0.2	0.2	0.3	0.3	0.6	0.7	0.8	0.8	0.9	1.7	1.9	2.0	2.1	2.2	3.0	3.4	3.5	3.7	3.9	
	10	-0.5	-0.5	-0.5	-0.5	-0.5	-0.2	-0.2	-0.1	-0.1	-0.1	0.2	0.3	0.4	0.4	0.4	1.3	1.5	1.6	1.6	1.7	2.6	2.9	3.0	3.2	3.3	
	15	-0.8	-0.8	-0.8	-0.8	-0.8	-0.5	-0.5	-0.5	-0.5	-0.5	-0.1	0.0	0.0	0.0	0.1	0.9	1.1	1.2	1.2	1.3	2.2	2.5	2.6	2.7	2.8	
	16	-0.9	-0.9	-0.9	-1.0	-1.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.2	-0.1	-0.1	-0.1	-0.1	0.8	1.0	1.0	1.1	1.2	2.0	2.3	2.4	2.6	2.7	

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Figure 4-38 (Sheet 8)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-35	5.2	6.0	6.3	6.7	7.1	5.4	6.3	6.6	6.9	7.3	5.7	6.5	6.9	7.3	7.7	5.9	6.8	7.2	7.6	8.0	6.2	7.1	7.5	7.9	8.4
	-30	5.2	6.0	6.3	6.7	7.0	5.4	6.2	6.6	6.9	7.3	5.7	6.5	6.9	7.2	7.7	5.9	6.8	7.2	7.6	8.0	6.2	7.1	7.5	7.9	8.4
	-25	5.2	6.0	6.3	6.7	7.0	5.4	6.2	6.6	6.9	7.3	5.7	6.5	6.9	7.2	7.6	5.9	6.8	7.2	7.6	8.0	6.2	7.1	7.5	7.9	8.4
	-20	5.2	6.0	6.3	6.7	7.0	5.4	6.3	6.6	6.9	7.3	5.7	6.5	6.9	7.2	7.6	5.9	6.8	7.2	7.6	8.0	6.2	7.1	7.5	7.9	8.3
	-15	5.3	6.0	6.3	6.7	7.0	5.5	6.3	6.6	6.9	7.3	5.7	6.5	6.9	7.2	7.6	6.0	6.8	7.2	7.6	8.0	6.2	7.1	7.5	7.9	8.3
	-10	5.3	6.0	6.3	6.7	7.0	5.5	6.3	6.6	6.9	7.3	5.7	6.6	6.9	7.2	7.6	6.0	6.8	7.2	7.6	8.0	6.2	7.2	7.5	7.9	8.3
	-5	5.3	6.0	6.3	6.7	7.0	5.5	6.3	6.6	6.9	7.3	5.7	6.6	6.9	7.2	7.6	6.0	6.9	7.2	7.6	8.0	6.3	7.2	7.5	7.9	8.3
	0	5.2	5.9	6.2	6.5	6.9	5.4	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
	5	5.1	5.8	6.1	6.4	6.7	5.3	6.0	6.3	6.6	7.0	5.5	6.3	6.6	6.9	7.3	5.8	6.6	6.9	7.2	7.6	6.0	6.9	7.2	7.6	8.0
	10	4.1	4.7	4.9	5.2	5.5	4.3	4.9	5.2	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.8	5.5	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7
1	-35	5.1	5.9	6.2	6.5	6.9	5.3	6.1	6.4	6.8	7.2	5.6	6.4	6.7	7.1	7.5	5.8	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.8	8.2
0	-30	5.1	5.9	6.2	6.5	6.9	5.3	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.8	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
0	-25	5.1	5.9	6.2	6.5	6.9	5.3	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.8	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
0	-20	5.1	5.9	6.2	6.5	6.9	5.3	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.8	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
	-15	5.2	5.9	6.2	6.5	6.9	5.4	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
	-10	5.2	5.9	6.2	6.5	6.9	5.4	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
	-5	5.1	5.9	6.1	6.4	6.8	5.3	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.8	6.7	7.0	7.3	7.7	6.1	7.0	7.3	7.7	8.1
	0	5.0	5.7	6.0	6.3	6.6	5.2	6.0	6.2	6.5	6.9	5.5	6.2	6.5	6.9	7.2	5.7	6.5	6.8	7.2	7.6	6.0	6.8	7.1	7.5	7.9
	5	4.6	5.2	5.5	5.7	6.0	4.8	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	6.9	5.5	6.3	6.6	6.9	7.3
	10	3.6	4.2	4.4	4.6	4.8	3.8	4.4	4.6	4.8	5.1	4.1	4.6	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0
2	-35	5.1	5.8	6.1	6.4	6.8	5.3	6.1	6.4	6.7	7.1	5.5	6.3	6.7	7.0	7.4	5.8	6.6	7.0	7.3	7.7	6.0	6.9	7.3	7.7	8.1
0	-30	5.1	5.8	6.1	6.4	6.8	5.3	6.0	6.4	6.7	7.0	5.5	6.3	6.6	7.0	7.4	5.8	6.6	7.0	7.3	7.7	6.0	6.9	7.3	7.6	8.1
0	-25	5.1	5.8	6.1	6.4	6.8	5.3	6.0	6.3	6.7	7.0	5.5	6.3	6.6	7.0	7.4	5.8	6.6	6.9	7.3	7.7	6.0	6.9	7.3	7.6	8.1
0	-20	5.1	5.8	6.1	6.4	6.8	5.3	6.1	6.3	6.7	7.0	5.5	6.3	6.6	7.0	7.4	5.8	6.6	6.9	7.3	7.7	6.0	6.9	7.3	7.6	8.0
	-15	5.1	5.8	6.1	6.4	6.8	5.3	6.1	6.4	6.7	7.0	5.6	6.3	6.7	7.0	7.4	5.8	6.6	7.0	7.3	7.7	6.1	6.9	7.3	7.6	8.0
	-10	5.1	5.8	6.1	6.4	6.8	5.3	6.1	6.4	6.7	7.0	5.6	6.4	6.7	7.0	7.4	5.8	6.6	7.0	7.3	7.7	6.1	6.9	7.3	7.6	8.0
	-5	5.0	5.7	6.0	6.3	6.6	5.2	5.9	6.2	6.5	6.9	5.5	6.2	6.5	6.8	7.2	5.7	6.5	6.8	7.2	7.5	6.0	6.8	7.1	7.5	7.9
	0	4.9	5.5	5.8	6.1	6.4	5.1	5.8	6.0	6.3	6.7	5.3	6.0	6.3	6.6	7.0	5.6	6.3	6.6	7.0	7.3	5.8	6.6	6.9	7.3	7.7
	5	4.1	4.7	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.6	4.5	5.1	5.4	5.6	5.9	4.7	5.4	5.7	5.9	6.2	5.0	5.7	5.9	6.2	6.6
	10	3.2	3.7	3.8	4.0	4.2	3.4	3.9	4.0	4.3	4.5	3.6	4.1	4.3	4.5	4.8	3.8	4.3	4.6	4.8	5.0	4.0	4.6	4.8	5.1	5.3
3	-35	5.1	5.9	6.2	6.5	6.8	5.3	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.8	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1
0	-30	5.1	5.9	6.1	6.5	6.8	5.3	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.8	6.7	7.0	7.4	7.7	6.1	7.0	7.3	7.7	8.1
0	-25	5.1	5.9	6.1	6.4	6.8	5.3	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.8	6.7	7.0	7.3	7.7	6.1	7.0	7.3	7.7	8.1
0	-20	5.1	5.9	6.1	6.5	6.8	5.3	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.8	6.7	7.0	7.3	7.7	6.1	7.0	7.3	7.7	8.1
	-15	5.2	5.9	6.2	6.5	6.8	5.4	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.3	7.7	6.1	7.0	7.3	7.7	8.1
	-10	5.1	5.8	6.1	6.4	6.7	5.3	6.1	6.4	6.7	7.0	5.6	6.4	6.7	7.0	7.3	5.8	6.6	7.0	7.3	7.7	6.1	6.9	7.3	7.6	8.0
	-5	4.9	5.6	5.9	6.2	6.5	5.1	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.4	7.7
	0	4.6	5.2	5.5	5.7	6.0	4.8	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.5	6.3	6.6	6.9	7.2
	5	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.0	5.3	4.2	4.8	5.1	5.3	5.6	4.5	5.1	5.3	5.6	5.9
	10	2.7	3.1	3.3	3.5	3.7	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	3.9	4.2	3.3	3.8	4.0	4.2	4.4	3.5	4.1	4.3	4.5	4.7
4	-35	5.2	5.9	6.2	6.5	6.8	5.4	6.1	6.4	6.8	7.1	5.6	6.4	6.7	7.1	7.5	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.2
0	-30	5.2	5.9	6.2	6.5	6.8	5.4	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.1	7.4	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.4	7.7	8.1
0	-25	5.2	5.9	6.2	6.5	6.8	5.4	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.1	7.4	5.9	6.7	7.0	7.4	7.8	6.1	7.0	7.3	7.7	8.1
0	-20	5.2	5.9	6.2	6.5	6.8	5.4	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.1	7.4	5.9	6.7	7.0	7.4	7.8	6.2	7.0	7.4	7.7	8.1
	-15	5.2	5.9	6.2	6.5	6.8	5.4	6.1	6.4	6.7	7.1	5.7	6.4	6.7	7.1	7.4	5.9	6.7	7.0	7.4	7.8	6.2	7.0	7.4	7.7	8.1
	-10	5.1	5.7	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.5	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.6	6.0	6.8	7.2	7.5	7.9
	-5	4.8	5.5	5.7	6.0	6.3	5.0	5.7	6.0	6.2	6.6	5.3	6.0	6.3	6.6	6.9	5.5	6.3	6.5	6.9	7.2	5.8	6.6	6.9	7.2	7.5
	0	4.1	4.6	4.9	5.1	5.3	4.3	4.9	5.1	5.3	5.6	4.5	5.1	5.4	5.6	5.9	4.7	5.4	5.6	5.9	6.2	5.0	5.7	5.9	6.2	6.5
	5	3.1	3.6	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	3.5	4.0	4.2	4.4	4.7	3.7	4.3	4.5	4.7	4.9	4.0	4.5	4.7	5.0	5.2
	10	2.3	2.7	2.8	2.9	3.1	2.5	2.9	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.8	3.1	3.6	3.7	3.9	4.1
5	-35	5.2	5.9	6.2	6.5	6.9	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.5	5.9	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2
0	-30	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.5	5.9	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2
0	-25	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.4	6.8	7.1	5.7	6.5	6.8	7.1	7.4	5.9	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2
0	-20	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.4	5.9	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.1
	-15	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.4	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.1
	-10	4.9	5.6	5.8	6.1	6.4	5.1	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.0	5.6	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.4	7.7
	-5	4.6	5.2	5.5	5.7	6.0	4.8	5.5	5.7	6.0	6.3	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.3
	0	3.6	4.1	4.2	4.4	4.7	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	5.0	5.2	4.2	4.8	5.0	5.3	5.5	4.5	5.1	5.3	5.6	5.8
	5	2.7	3.0	3.2	3.4	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.8	4.0	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6
	10	1.9	2.2	2.3	2.4	2.5	2.0	2.4	2.5	2.6	2.7	2.2	2.6	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.3	2.6	3.0	3.2	3.4	3.5

525AFM-06-00

Figure 4-39 (Sheet 1 of 6)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2

SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS −10	0	10	20	30	11000 WIND KNOTS −10	0	10	20	30	10500 WIND KNOTS −10	0	10	20	30	9500 WIND KNOTS −10	0	10	20	30	8500 WIND KNOTS −10	0	10	20	30
0	−35	6.5	7.5	7.9	8.3	8.8	7.1	8.2	8.6	9.1	9.6	7.9	9.1	9.6	10.1	10.7	9.8	11.3	11.9	12.6	13.3	12.1	14.0	14.7	15.5	16.5
	−30	6.5	7.5	7.8	8.3	8.8	7.1	8.1	8.6	9.0	9.6	7.9	9.1	9.6	10.1	10.7	9.8	11.3	11.9	12.5	13.3	12.1	13.9	14.7	15.5	16.4
	−25	6.5	7.5	7.8	8.3	8.7	7.1	8.1	8.6	9.0	9.6	7.9	9.1	9.6	10.1	10.7	9.8	11.3	11.9	12.5	13.2	12.1	13.9	14.7	15.5	16.4
	−20	6.5	7.5	7.8	8.3	8.7	7.1	8.1	8.6	9.0	9.5	7.9	9.1	9.6	10.1	10.7	9.8	11.3	11.9	12.5	13.2	12.1	13.9	14.7	15.5	16.4
	−15	6.5	7.5	7.8	8.3	8.7	7.1	8.2	8.6	9.0	9.5	7.9	9.1	9.6	10.1	10.7	9.8	11.3	11.9	12.5	13.2	12.1	14.0	14.7	15.5	16.4
	−10	6.5	7.5	7.9	8.3	8.7	7.1	8.2	8.6	9.0	9.5	8.0	9.1	9.6	10.1	10.7	9.9	11.3	11.9	12.5	13.2	12.2	14.0	14.7	15.5	16.4
	−5	6.5	7.5	7.9	8.3	8.7	7.1	8.2	8.6	9.0	9.5	8.0	9.1	9.6	10.1	10.6	9.9	11.3	11.9	12.5	13.2	12.2	14.0	14.7	15.5	16.4
	0	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.9	9.3	7.8	9.0	9.4	9.9	10.4	9.7	11.1	11.7	12.3	13.0	12.0	13.8	14.5	15.3	16.1
	5	6.3	7.2	7.5	7.9	8.4	6.9	7.9	8.2	8.7	9.1	7.7	8.8	9.2	9.7	10.2	9.6	11.0	11.5	12.1	12.8	11.9	13.6	14.3	15.0	15.8
	10	5.3	6.0	6.3	6.6	7.0	5.8	6.6	7.0	7.3	7.7	6.5	7.5	7.9	8.3	8.7	8.3	9.5	10.0	10.5	11.1	10.4	12.0	12.6	13.3	14.0
1	−35	6.4	7.3	7.7	8.1	8.6	6.9	8.0	8.4	8.9	9.4	7.8	8.9	9.4	9.9	10.5	9.6	11.1	11.7	12.3	13.1	11.9	13.8	14.5	15.3	16.2
0	−30	6.4	7.3	7.7	8.1	8.6	6.9	8.0	8.4	8.9	9.4	7.8	8.9	9.4	9.9	10.5	9.6	11.1	11.7	12.3	13.0	11.9	13.7	14.5	15.3	16.2
0	−25	6.4	7.3	7.7	8.1	8.6	7.0	8.0	8.4	8.9	9.4	7.8	8.9	9.4	9.9	10.5	9.7	11.1	11.7	12.3	13.0	12.0	13.8	14.5	15.3	16.1
0	−20	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.8	9.3	7.8	8.9	9.4	9.9	10.4	9.7	11.1	11.7	12.3	13.0	12.0	13.8	14.5	15.3	16.1
	−15	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.9	9.3	7.8	9.0	9.4	9.9	10.4	9.7	11.1	11.7	12.3	13.0	12.0	13.8	14.5	15.3	16.1
	−10	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.9	9.3	7.8	9.0	9.4	9.9	10.4	9.7	11.1	11.7	12.3	13.0	12.0	13.8	14.5	15.3	16.1
	−5	6.4	7.3	7.6	8.0	8.5	7.0	8.0	8.4	8.8	9.3	7.8	8.9	9.3	9.8	10.4	9.7	11.1	11.6	12.2	12.9	12.0	13.7	14.4	15.2	16.0
	0	6.2	7.1	7.5	7.9	8.3	6.8	7.8	8.2	8.6	9.1	7.6	8.7	9.2	9.6	10.1	9.5	10.9	11.4	12.0	12.6	11.8	13.5	14.2	14.9	15.7
	5	5.7	6.6	6.9	7.2	7.6	6.3	7.2	7.6	7.9	8.4	7.1	8.1	8.5	8.9	9.4	8.9	10.2	10.7	11.2	11.8	11.1	12.7	13.4	14.1	14.8
	10	4.8	5.4	5.7	6.0	6.3	5.3	6.0	6.3	6.7	7.0	6.0	6.8	7.2	7.5	8.0	7.6	8.8	9.2	9.7	10.2	9.7	11.2	11.7	12.3	13.0
2	−35	6.3	7.2	7.6	8.0	8.5	6.9	7.9	8.3	8.8	9.3	7.7	8.9	9.3	9.8	10.4	9.6	11.0	11.6	12.2	12.9	11.9	13.7	14.4	15.2	16.0
0	−30	6.3	7.2	7.6	8.0	8.4	6.9	7.9	8.3	8.8	9.2	7.7	8.8	9.3	9.8	10.3	9.6	11.0	11.6	12.2	12.9	11.9	13.6	14.3	15.1	16.0
0	−25	6.3	7.2	7.6	8.0	8.4	6.9	7.9	8.3	8.7	9.2	7.7	8.8	9.3	9.8	10.3	9.6	11.0	11.6	12.2	12.9	11.9	13.6	14.3	15.1	16.0
0	−20	6.3	7.2	7.6	8.0	8.4	6.9	7.9	8.3	8.7	9.2	7.7	8.8	9.3	9.8	10.3	9.6	11.0	11.6	12.2	12.8	11.9	13.6	14.3	15.1	15.9
	−15	6.3	7.2	7.6	8.0	8.4	6.9	7.9	8.3	8.7	9.2	7.7	8.9	9.3	9.8	10.3	9.6	11.0	11.6	12.2	12.8	11.9	13.7	14.3	15.1	15.9
	−10	6.4	7.3	7.6	8.0	8.4	6.9	7.9	8.3	8.7	9.2	7.8	8.9	9.3	9.8	10.3	9.7	11.0	11.6	12.2	12.8	12.0	13.7	14.4	15.1	15.9
	−5	6.2	7.1	7.5	7.8	8.2	6.8	7.8	8.2	8.6	9.0	7.6	8.7	9.1	9.6	10.1	9.5	10.9	11.4	12.0	12.6	11.8	13.5	14.1	14.9	15.7
	0	6.1	6.9	7.3	7.6	8.0	6.7	7.6	8.0	8.4	8.8	7.5	8.5	8.9	9.4	9.9	9.3	10.6	11.2	11.7	12.3	11.6	13.2	13.9	14.6	15.4
	5	5.2	6.0	6.2	6.6	6.9	5.7	6.6	6.9	7.2	7.6	6.5	7.4	7.8	8.2	8.6	8.2	9.4	9.9	10.4	10.9	10.4	11.9	12.5	13.1	13.8
	10	4.3	4.9	5.1	5.4	5.7	4.8	5.4	5.7	6.0	6.3	5.4	6.2	6.5	6.9	7.2	7.0	8.0	8.4	8.9	9.4	9.0	10.3	10.9	11.4	12.1
3	−35	6.4	7.3	7.7	8.1	8.5	6.9	8.0	8.4	8.8	9.3	7.8	8.9	9.4	9.9	10.4	9.6	11.1	11.6	12.3	12.9	11.9	13.7	14.4	15.2	16.0
0	−30	6.4	7.3	7.6	8.0	8.5	6.9	8.0	8.4	8.8	9.3	7.8	8.9	9.3	9.8	10.4	9.7	11.1	11.6	12.2	12.9	12.0	13.7	14.4	15.2	16.0
0	−25	6.4	7.3	7.6	8.0	8.5	7.0	8.0	8.3	8.8	9.3	7.8	8.9	9.3	9.8	10.4	9.7	11.1	11.6	12.2	12.9	12.0	13.7	14.4	15.1	16.0
0	−20	6.4	7.3	7.6	8.0	8.5	7.0	8.0	8.4	8.8	9.2	7.8	8.9	9.3	9.8	10.3	9.7	11.1	11.6	12.2	12.9	12.0	13.7	14.4	15.1	16.0
	−15	6.4	7.3	7.6	8.0	8.5	7.0	8.0	8.4	8.8	9.2	7.8	8.9	9.3	9.8	10.3	9.7	11.1	11.6	12.2	12.9	12.0	13.7	14.4	15.1	16.0
	−10	6.4	7.3	7.6	8.0	8.4	7.0	7.9	8.3	8.7	9.2	7.8	8.9	9.3	9.8	10.3	9.7	11.0	11.6	12.1	12.8	12.0	13.7	14.3	15.1	15.9
	−5	6.2	7.0	7.3	7.7	8.1	6.7	7.7	8.0	8.4	8.9	7.5	8.6	9.0	9.4	9.9	9.4	10.7	11.2	11.8	12.4	11.7	13.3	14.0	14.7	15.5
	0	5.8	6.6	6.9	7.2	7.6	6.3	7.2	7.5	7.9	8.3	7.1	8.1	8.5	8.9	9.4	8.9	10.2	10.7	11.2	11.8	11.2	12.7	13.3	14.0	14.8
	5	4.7	5.4	5.6	5.9	6.2	5.2	5.9	6.2	6.5	6.9	5.9	6.7	7.1	7.4	7.8	7.6	8.6	9.1	9.5	10.0	9.6	11.0	11.6	12.2	12.8
	10	3.8	4.3	4.5	4.8	5.0	4.3	4.9	5.1	5.4	5.6	4.9	5.6	5.9	6.2	6.5	6.4	7.3	7.7	8.1	8.5	8.3	9.6	10.0	10.6	11.2
4	−35	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.8	9.3	7.8	9.0	9.4	9.9	10.4	9.7	11.1	11.7	12.3	13.0	12.0	13.8	14.5	15.2	16.1
0	−30	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.8	9.3	7.8	9.0	9.4	9.9	10.4	9.7	11.1	11.7	12.3	12.9	12.0	13.8	14.4	15.2	16.0
0	−25	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.8	9.3	7.8	8.9	9.4	9.9	10.4	9.7	11.1	11.7	12.2	12.9	12.0	13.8	14.4	15.2	16.0
0	−20	6.4	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.8	9.3	7.9	9.0	9.4	9.9	10.4	9.8	11.1	11.7	12.2	12.9	12.1	13.8	14.4	15.2	16.0
	−15	6.5	7.3	7.7	8.1	8.5	7.0	8.0	8.4	8.8	9.3	7.9	9.0	9.4	9.9	10.4	9.8	11.1	11.7	12.2	12.9	12.1	13.8	14.4	15.2	16.0
	−10	6.3	7.2	7.5	7.9	8.3	6.9	7.8	8.2	8.6	9.0	7.7	8.8	9.2	9.6	10.1	9.6	10.9	11.4	12.0	12.6	11.9	13.5	14.2	14.9	15.7
	−5	6.0	6.9	7.2	7.5	7.9	6.6	7.5	7.9	8.2	8.7	7.4	8.4	8.8	9.2	9.7	9.3	10.5	11.0	11.6	12.2	11.5	13.1	13.7	14.4	15.2
	0	5.2	6.0	6.2	6.5	6.9	5.8	6.6	6.9	7.2	7.6	6.5	7.4	7.7	8.1	8.6	8.2	9.4	9.8	10.3	10.9	10.4	11.9	12.4	13.1	13.8
	5	4.2	4.8	5.0	5.3	5.5	4.7	5.4	5.6	5.9	6.2	5.4	6.1	6.4	6.7	7.1	6.9	7.9	8.3	8.7	9.2	8.9	10.2	10.7	11.3	11.9
	10	3.3	3.8	4.0	4.2	4.4	3.8	4.3	4.5	4.8	5.0	4.4	5.0	5.3	5.5	5.8	5.8	6.7	7.0	7.4	7.8	7.7	8.8	9.3	9.7	10.3
5	−35	6.5	7.4	7.8	8.2	8.6	7.1	8.1	8.5	8.9	9.4	7.9	9.0	9.5	9.9	10.5	9.8	11.2	11.7	12.3	13.0	12.1	13.8	14.5	15.3	16.1
0	−30	6.5	7.4	7.7	8.1	8.6	7.1	8.1	8.5	8.9	9.3	7.9	9.0	9.4	9.9	10.4	9.8	11.2	11.7	12.3	13.0	12.1	13.8	14.5	15.2	16.1
0	−25	6.5	7.4	7.7	8.1	8.5	7.1	8.1	8.5	8.9	9.3	7.9	9.0	9.4	9.9	10.4	9.8	11.2	11.7	12.3	12.9	12.1	13.8	14.5	15.2	16.0
0	−20	6.5	7.4	7.7	8.1	8.5	7.1	8.1	8.5	8.9	9.3	7.9	9.0	9.4	9.9	10.4	9.8	11.2	11.7	12.3	12.9	12.2	13.8	14.5	15.2	16.0
	−15	6.5	7.4	7.7	8.1	8.5	7.1	8.1	8.5	8.9	9.3	7.9	9.0	9.4	9.9	10.4	9.9	11.2	11.7	12.3	12.9	12.2	13.8	14.5	15.2	16.0
	−10	6.2	7.0	7.3	7.7	8.1	6.8	7.7	8.0	8.4	8.8	7.6	8.6	9.0	9.4	9.9	9.4	10.7	11.2	11.8	12.4	11.7	13.3	14.0	14.6	15.4
	−5	5.9	6.6	7.0	7.3	7.6	6.4	7.3	7.6	8.0	8.4	7.2	8.2	8.6	9.0	9.4	9.0	10.3	10.7	11.3	11.8	11.3	12.8	13.4	14.1	14.8
	0	4.7	5.3	5.6	5.9	6.2	5.2	5.9	6.2	6.5	6.8	5.9	6.7	7.0	7.4	7.8	7.6	8.6	9.0	9.5	10.0	9.6	11.0	11.5	12.1	12.7
	5	3.7	4.2	4.4	4.7	4.9	4.2	4.8	5.0	5.3	5.5	4.8	5.5	5.8	6.1	6.4	6.3	7.2	7.6	8.0	8.4	8.2	9.4	9.9	10.4	11.0
	10	2.9	3.3	3.4	3.6	3.8	3.3	3.8	4.0	4.2	4.4	3.9	4.5	4.7	4.9	5.2	5.3	6.1	6.4	6.7	7.0	7.0	8.1	8.5	8.9	9.4

525AFM-06-00

Figure 4-39 (Sheet 2)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		12375					12200					12000					11800					11600					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
6	-35	5.2	5.9	6.2	6.5	6.9	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2	
0	-30	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.5	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2	
0	-25	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.4	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.2	
0	-20	5.2	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.4	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.8	8.1	
	-15	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.6	6.1	6.9	7.2	7.6	7.9	
	-10	4.8	5.4	5.6	5.9	6.2	5.0	5.6	5.9	6.2	6.5	5.2	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.7	6.5	6.8	7.1	7.5	
	-5	4.1	4.7	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.6	4.6	5.2	5.4	5.7	5.9	4.8	5.5	5.7	6.0	6.3	5.1	5.7	6.0	6.3	6.6	
	0	3.1	3.5	3.7	3.9	4.1	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.7	4.9	4.0	4.5	4.7	4.9	5.2	
	5	2.2	2.6	2.7	2.8	3.0	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	3.0	3.5	3.6	3.8	4.0	
	10	1.5	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	3.0	
7	-35	5.2	5.9	6.2	6.5	6.8	5.4	6.2	6.4	6.7	7.1	5.7	6.4	6.7	7.1	7.4	5.9	6.7	7.0	7.4	7.8	6.2	7.0	7.4	7.7	8.1	
0	-30	5.2	5.9	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.0	5.7	6.4	6.7	7.0	7.4	5.9	6.7	7.0	7.3	7.7	6.2	7.0	7.3	7.7	8.1	
0	-25	5.1	5.8	6.1	6.4	6.7	5.4	6.1	6.3	6.6	7.0	5.6	6.4	6.6	6.9	7.3	5.9	6.6	6.9	7.3	7.6	6.1	7.0	7.3	7.6	8.0	
0	-20	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.6	6.1	6.9	7.2	7.5	7.9	
	-15	4.9	5.5	5.7	6.0	6.3	5.1	5.7	6.0	6.2	6.5	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.6	
	-10	4.5	5.1	5.4	5.6	5.9	4.7	5.4	5.6	5.9	6.1	5.0	5.6	5.9	6.2	6.4	5.2	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	
	-5	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.0	5.3	4.3	4.9	5.1	5.3	5.6	4.5	5.1	5.4	5.6	5.9	
	0	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	3.9	3.2	3.7	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	
	5	1.8	2.1	2.2	2.3	2.4	2.0	2.2	2.4	2.5	2.6	2.1	2.5	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.1	2.6	2.9	3.1	3.2	3.4	
	10	1.1	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.2	1.8	2.1	2.2	2.3	2.4	
8	-35	5.1	5.8	6.1	6.4	6.7	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.3	5.9	6.6	6.9	7.3	7.6	6.1	6.9	7.3	7.6	8.0	
0	-30	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.6	6.1	6.9	7.2	7.5	7.9	
0	-25	5.1	5.7	6.0	6.2	6.5	5.3	6.0	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.5	6.1	6.8	7.2	7.5	7.8	
0	-20	5.0	5.6	5.9	6.1	6.4	5.2	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.7	7.0	5.7	6.4	6.7	7.0	7.3	6.0	6.7	7.0	7.3	7.7	
	-15	4.6	5.2	5.4	5.6	5.9	4.8	5.4	5.6	5.9	6.2	5.0	5.7	5.9	6.2	6.5	5.3	6.0	6.2	6.5	6.8	5.5	6.3	6.5	6.8	7.2	
	-10	4.1	4.6	4.8	5.1	5.3	4.3	4.9	5.1	5.3	5.6	4.5	5.1	5.3	5.6	5.9	4.8	5.4	5.6	5.9	6.2	5.0	5.7	5.9	6.2	6.5	
	-5	3.1	3.6	3.7	3.9	4.1	3.3	3.8	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.5	4.7	5.0	5.2	
	0	2.2	2.5	2.6	2.7	2.9	2.3	2.7	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.8	3.1	3.3	3.4	3.6	3.0	3.4	3.5	3.7	3.9	
	5	1.4	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.7	2.8	
	10	0.7	0.8	0.9	0.9	1.0	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.5	1.6	1.4	1.6	1.7	1.8	1.9	
9	-35	4.9	5.6	5.8	6.1	6.4	5.1	5.8	6.1	6.3	6.6	5.4	6.1	6.4	6.6	7.0	5.6	6.4	6.7	7.0	7.3	5.9	6.7	7.0	7.3	7.7	
0	-30	4.8	5.4	5.7	5.9	6.2	5.0	5.7	5.9	6.2	6.5	5.3	5.9	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.5	
0	-25	4.7	5.3	5.5	5.8	6.0	4.9	5.5	5.7	6.0	6.3	5.1	5.8	6.0	6.3	6.6	5.4	6.1	6.3	6.6	6.9	5.6	6.4	6.6	6.9	7.3	
0	-20	4.3	4.8	5.0	5.3	5.5	4.5	5.1	5.3	5.5	5.8	4.7	5.3	5.6	5.8	6.1	5.0	5.6	5.8	6.1	6.4	5.2	5.9	6.1	6.4	6.7	
	-15	3.7	4.1	4.3	4.5	4.7	3.9	4.4	4.5	4.8	5.0	4.1	4.6	4.8	5.0	5.3	4.3	4.9	5.1	5.3	5.6	4.6	5.2	5.4	5.6	5.9	
	-10	2.9	3.3	3.5	3.6	3.8	3.1	3.5	3.7	3.8	4.0	3.3	3.8	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	
	-5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.6	2.8	2.9	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	
	0	1.2	1.4	1.5	1.6	1.7	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	
	5	0.5	0.6	0.7	0.7	0.8	0.6	0.8	0.8	0.9	1.0	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.5	1.6	
	10	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	
1	-35	4.7	5.3	5.5	5.7	6.0	4.9	5.5	5.7	6.0	6.3	5.1	5.8	6.0	6.3	6.6	5.4	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.3	
0	-30	4.5	5.0	5.3	5.5	5.8	4.7	5.3	5.5	5.7	6.0	4.9	5.5	5.8	6.0	6.3	5.2	5.8	6.1	6.4	6.6	5.4	6.1	6.4	6.7	7.0	
0	-25	4.3	4.8	5.0	5.3	5.5	4.5	5.0	5.3	5.5	5.8	4.7	5.3	5.5	5.8	6.1	5.0	5.6	5.8	6.1	6.4	5.2	5.9	6.1	6.4	6.7	
0	-20	3.6	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.6	4.8	4.0	4.5	4.7	4.9	5.1	4.2	4.8	5.0	5.2	5.4	4.4	5.0	5.2	5.5	5.7	
0	-15	2.8	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.2	4.5	3.7	4.1	4.3	4.5	4.7	
	-10	1.9	2.1	2.2	2.4	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	2.9	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.2	3.3	3.5	
	-5	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.3	1.6	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	
	0	0.3	0.4	0.5	0.5	0.5	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	0.9	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.2	1.3	1.4	
	5	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	
	10	-0.9	-0.9	-0.9	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	
1	-35	4.2	4.7	5.0	5.2	5.4	4.4	5.0	5.2	5.4	5.7	4.6	5.2	5.5	5.7	6.0	4.9	5.5	5.8	6.0	6.3	5.1	5.8	6.0	6.3	6.6	
1	-30	4.0	4.5	4.7	4.9	5.2	4.2	4.8	5.0	5.2	5.4	4.4	5.0	5.2	5.5	5.7	4.7	5.3	5.5	5.8	6.0	4.9	5.6	5.8	6.1	6.4	
0	-25	3.7	4.2	4.3	4.5	4.7	3.9	4.4	4.6	4.8	5.0	4.1	4.6	4.8	5.0	5.3	4.3	4.9	5.1	5.3	5.6	4.6	5.2	5.4	5.6	5.9	
0	-20	3.1	3.5	3.6	3.8	4.0	3.3	3.7	3.9	4.0	4.2	3.5	3.9	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	3.9	4.5	4.7	4.9	5.1	
0	-15	2.4	2.7	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.3	2.7	3.1	3.3	3.4	3.6	3.0	3.4	3.5	3.7	3.8	3.2	3.6	3.8	3.9	4.1	
	-10	1.4	1.7	1.8	1.8	2.0	1.6	1.8	1.9	2.0	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.8	2.9	
	-5	0.6	0.8	0.8	0.9	0.9	0.8	0.9	1.0	1.1	1.1	0.9	1.1	1.2	1.3	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	
	0	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	
	5	-0.7	-0.7	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	
	10	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.7	-0.6	-0.6	-0.6	

525AFM-06-00

Figure 4-39 (Sheet 3)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2

SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS −10	0	10	20	30	11000 WIND KNOTS −10	0	10	20	30	10500 WIND KNOTS −10	0	10	20	30	9500 WIND KNOTS −10	0	10	20	30	8500 WIND KNOTS −10	0	10	20	30
6	−35	6.5	7.4	7.8	8.2	8.6	7.1	8.1	8.5	8.9	9.4	8.0	9.1	9.5	10.0	10.5	9.9	11.3	11.8	12.4	13.0	12.2	13.9	14.6	15.3	16.1
0	−30	6.5	7.4	7.8	8.1	8.5	7.1	8.1	8.5	8.9	9.4	8.0	9.1	9.5	10.0	10.5	9.9	11.2	11.8	12.3	13.0	12.2	13.9	14.6	15.3	16.1
0	−25	6.5	7.4	7.8	8.1	8.5	7.1	8.1	8.5	8.9	9.3	8.0	9.1	9.5	9.9	10.4	9.9	11.2	11.8	12.3	13.0	12.2	13.9	14.5	15.3	16.1
0	−20	6.5	7.4	7.7	8.1	8.5	7.1	8.1	8.5	8.9	9.3	8.0	9.1	9.5	9.9	10.4	9.9	11.2	11.8	12.3	12.9	12.2	13.9	14.5	15.2	16.0
	−15	6.4	7.2	7.6	7.9	8.3	7.0	7.9	8.3	8.7	9.1	7.8	8.9	9.3	9.7	10.2	9.7	11.0	11.5	12.1	12.7	12.0	13.7	14.3	15.0	15.8
	−10	6.0	6.8	7.1	7.5	7.8	6.6	7.5	7.8	8.2	8.6	7.4	8.4	8.8	9.2	9.6	9.3	10.5	11.0	11.5	12.1	11.5	13.1	13.7	14.3	15.1
	−5	5.3	6.0	6.3	6.6	6.9	5.9	6.7	7.0	7.3	7.7	6.6	7.5	7.9	8.2	8.6	8.4	9.5	10.0	10.4	11.0	10.6	12.0	12.6	13.2	13.8
	0	4.2	4.8	5.0	5.2	5.5	4.7	5.4	5.6	5.9	6.2	5.4	6.1	6.4	6.7	7.1	6.9	7.9	8.3	8.7	9.2	9.0	10.2	10.7	11.2	11.8
	5	3.2	3.7	3.9	4.1	4.3	3.7	4.2	4.4	4.7	4.9	4.3	4.9	5.2	5.4	5.7	5.8	6.6	6.9	7.2	7.6	7.6	8.7	9.1	9.6	10.1
	10	2.4	2.8	2.9	3.1	3.2	2.9	3.3	3.4	3.6	3.8	3.4	3.9	4.1	4.3	4.6	4.8	5.5	5.7	6.0	6.3	6.4	7.4	7.7	8.1	8.6
7	−35	6.5	7.4	7.7	8.1	8.5	7.1	8.1	8.4	8.9	9.3	7.9	9.0	9.4	9.9	10.4	9.9	11.2	11.7	12.3	12.9	12.2	13.9	14.5	15.2	16.0
0	−30	6.5	7.3	7.7	8.0	8.4	7.1	8.0	8.4	8.8	9.2	7.9	9.0	9.4	9.9	10.3	9.8	11.2	11.7	12.3	12.9	12.2	13.8	14.5	15.2	15.9
0	−25	6.4	7.3	7.6	8.0	8.4	7.0	8.0	8.3	8.7	9.2	7.9	8.9	9.3	9.8	10.3	9.8	11.1	11.6	12.2	12.8	12.1	13.7	14.4	15.1	15.8
0	−20	6.4	7.2	7.5	7.9	8.3	7.0	7.9	8.3	8.7	9.1	7.8	8.9	9.3	9.7	10.2	9.7	11.0	11.5	12.1	12.7	12.0	13.6	14.3	15.0	15.7
	−15	6.1	6.9	7.2	7.5	7.9	6.7	7.6	7.9	8.3	8.7	7.5	8.5	8.9	9.3	9.8	9.4	10.6	11.1	11.6	12.2	11.7	13.2	13.8	14.5	15.2
	−10	5.8	6.5	6.8	7.1	7.5	6.3	7.2	7.5	7.8	8.2	7.1	8.1	8.4	8.8	9.3	9.0	10.1	10.6	11.1	11.7	11.2	12.7	13.3	13.9	14.6
	−5	4.8	5.4	5.7	5.9	6.2	5.3	6.0	6.3	6.6	6.9	6.0	6.8	7.1	7.5	7.8	7.7	8.7	9.1	9.6	10.1	9.8	11.1	11.6	12.2	12.8
	0	3.7	4.2	4.4	4.6	4.8	4.2	4.7	5.0	5.2	5.5	4.8	5.5	5.7	6.0	6.3	6.3	7.2	7.5	7.9	8.3	8.2	9.4	9.8	10.3	10.9
	5	2.8	3.2	3.3	3.5	3.7	3.2	3.7	3.9	4.1	4.3	3.8	4.4	4.6	4.8	5.1	5.2	6.0	6.2	6.5	6.9	6.9	7.9	8.3	8.7	9.2
	10	2.0	2.3	2.4	2.5	2.7	2.4	2.8	2.9	3.1	3.2	3.0	3.4	3.6	3.8	4.0	4.3	4.9	5.1	5.4	5.7	5.8	6.7	7.0	7.4	7.8
8	−35	6.4	7.3	7.6	8.0	8.3	7.0	7.9	8.3	8.7	9.1	7.8	8.9	9.3	9.7	10.2	9.8	11.1	11.6	12.1	12.8	12.1	13.7	14.4	15.1	15.8
0	−30	6.4	7.2	7.5	7.9	8.3	7.0	7.9	8.3	8.6	9.1	7.8	8.8	9.2	9.7	10.2	9.7	11.0	11.5	12.1	12.7	12.1	13.7	14.3	15.0	15.7
0	−25	6.3	7.2	7.5	7.8	8.2	6.9	7.8	8.2	8.6	9.0	7.8	8.8	9.2	9.6	10.1	9.7	11.0	11.5	12.0	12.6	12.0	13.6	14.2	14.9	15.6
0	−20	6.2	7.0	7.4	7.7	8.1	6.8	7.7	8.1	8.4	8.8	7.7	8.7	9.0	9.5	9.9	9.6	10.8	11.3	11.8	12.4	11.9	13.4	14.0	14.7	15.4
	−15	5.8	6.6	6.9	7.2	7.5	6.4	7.2	7.5	7.9	8.3	7.2	8.1	8.5	8.9	9.3	9.0	10.2	10.7	11.2	11.7	11.3	12.8	13.4	14.0	14.7
	−10	5.3	6.0	6.2	6.5	6.8	5.8	6.6	6.9	7.2	7.6	6.6	7.5	7.8	8.2	8.6	8.4	9.5	9.9	10.4	10.9	10.5	11.9	12.5	13.1	13.7
	−5	4.2	4.8	5.0	5.2	5.5	4.7	5.4	5.6	5.9	6.2	5.4	6.2	6.4	6.7	7.1	7.0	8.0	8.3	8.7	9.2	9.1	10.3	10.8	11.3	11.9
	0	3.2	3.6	3.8	4.0	4.2	3.7	4.2	4.4	4.6	4.8	4.3	4.9	5.1	5.4	5.6	5.7	6.5	6.8	7.2	7.5	7.6	8.6	9.0	9.5	10.0
	5	2.3	2.6	2.8	2.9	3.1	2.7	3.1	3.3	3.5	3.6	3.3	3.8	4.0	4.2	4.4	4.7	5.3	5.6	5.9	6.2	6.3	7.2	7.6	8.0	8.4
	10	1.5	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.6	2.5	2.9	3.0	3.2	3.4	3.8	4.3	4.5	4.7	5.0	5.3	6.1	6.4	6.7	7.0
9	−35	6.2	7.0	7.3	7.6	8.0	6.8	7.7	8.0	8.4	8.8	7.6	8.6	9.0	9.4	9.9	9.5	10.7	11.2	11.8	12.3	11.8	13.4	14.0	14.7	15.4
0	−30	6.0	6.8	7.1	7.5	7.8	6.6	7.5	7.8	8.2	8.6	7.4	8.4	8.8	9.2	9.7	9.3	10.5	11.0	11.5	12.1	11.6	13.2	13.8	14.4	15.1
0	−25	5.9	6.7	7.0	7.3	7.6	6.5	7.3	7.7	8.0	8.4	7.3	8.2	8.6	9.0	9.4	9.2	10.4	10.8	11.3	11.9	11.4	12.9	13.5	14.2	14.9
0	−20	5.5	6.2	6.5	6.7	7.1	6.0	6.8	7.1	7.4	7.8	6.8	7.7	8.0	8.4	8.8	8.6	9.7	10.2	10.7	11.2	10.8	12.3	12.8	13.4	14.1
	−15	4.8	5.4	5.7	5.9	6.2	5.3	6.0	6.3	6.6	6.9	6.1	6.9	7.2	7.5	7.9	7.8	8.8	9.2	9.6	10.1	9.9	11.2	11.7	12.3	12.9
	−10	4.0	4.5	4.7	5.0	5.2	4.5	5.1	5.3	5.6	5.8	5.2	5.9	6.1	6.4	6.7	6.8	7.7	8.0	8.4	8.8	8.7	9.9	10.4	10.9	11.4
	−5	3.0	3.5	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.6	4.1	4.7	4.9	5.1	5.4	5.6	6.3	6.6	6.9	7.3	7.4	8.4	8.8	9.2	9.7
	0	2.1	2.4	2.6	2.7	2.8	2.6	2.9	3.1	3.2	3.4	3.1	3.6	3.8	3.9	4.1	4.5	5.1	5.3	5.6	5.9	6.1	7.0	7.3	7.7	8.1
	5	1.4	1.6	1.7	1.8	1.9	1.8	2.0	2.1	2.3	2.4	2.3	2.7	2.8	2.9	3.1	3.6	4.1	4.3	4.5	4.7	5.1	5.8	6.1	6.4	6.7
	10	0.7	0.8	0.9	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.6	1.8	1.9	2.0	2.2	2.7	3.1	3.3	3.5	3.7	4.1	4.8	5.0	5.2	5.5
1	−35	5.9	6.6	6.9	7.3	7.6	6.5	7.3	7.6	8.0	8.4	7.3	8.2	8.6	9.0	9.4	9.1	10.3	10.8	11.3	11.8	11.4	12.9	13.5	14.1	14.8
0	−30	5.7	6.4	6.7	7.0	7.3	6.2	7.1	7.4	7.7	8.1	7.0	7.9	8.3	8.7	9.1	8.9	10.0	10.5	11.0	11.5	11.1	12.6	13.1	13.8	14.4
0	−25	5.5	6.2	6.4	6.7	7.1	6.0	6.8	7.1	7.4	7.8	6.8	7.7	8.0	8.4	8.8	8.6	9.7	10.2	10.6	11.2	10.8	12.3	12.8	13.4	14.1
0	−20	4.7	5.3	5.5	5.8	6.1	5.2	5.9	6.2	6.4	6.8	5.9	6.7	7.0	7.3	7.7	7.6	8.6	9.0	9.5	9.9	9.8	11.0	11.6	12.1	12.7
0	−15	3.9	4.4	4.6	4.8	5.0	4.4	5.0	5.2	5.4	5.7	5.1	5.7	6.0	6.3	6.6	6.6	7.5	7.9	8.2	8.7	8.6	9.8	10.2	10.7	11.3
	−10	2.9	3.3	3.4	3.6	3.8	3.3	3.8	3.9	4.1	4.3	3.9	4.5	4.7	4.9	5.1	5.4	6.1	6.4	6.7	7.0	7.1	8.1	8.5	8.9	9.4
	−5	1.9	2.2	2.3	2.4	2.6	2.3	2.7	2.8	3.0	3.1	2.9	3.3	3.5	3.7	3.9	4.2	4.8	5.1	5.3	5.6	5.8	6.6	7.0	7.3	7.7
	0	1.2	1.4	1.4	1.5	1.6	1.6	1.8	1.9	2.0	2.1	2.1	2.4	2.5	2.7	2.8	3.3	3.8	4.0	4.2	4.4	4.8	5.5	5.8	6.1	6.4
	5	0.5	0.6	0.6	0.7	0.8	0.8	1.0	1.1	1.1	1.2	1.3	1.6	1.7	1.8	1.9	2.5	2.9	3.0	3.2	3.4	3.9	4.5	4.7	4.9	5.2
	10	−0.1	−0.1	−0.1	0.0	0.0	0.2	0.3	0.3	0.4	0.4	0.7	0.8	0.9	1.0	1.0	1.8	2.1	2.2	2.3	2.4	3.1	3.5	3.7	3.9	4.1
1	−35	5.4	6.1	6.4	6.6	7.0	5.9	6.7	7.0	7.3	7.7	6.7	7.6	7.9	8.3	8.7	8.5	9.6	10.0	10.5	11.0	10.7	12.1	12.7	13.3	13.9
1	−30	5.2	5.9	6.1	6.4	6.7	5.7	6.5	6.8	7.1	7.4	6.5	7.3	7.6	8.0	8.4	8.3	9.3	9.7	10.2	10.7	10.4	11.8	12.3	12.9	13.5
0	−25	4.8	5.5	5.7	5.9	6.2	5.4	6.1	6.3	6.6	6.9	6.1	6.9	7.2	7.5	7.9	7.8	8.8	9.2	9.6	10.1	9.9	11.2	11.7	12.3	12.9
0	−20	4.2	4.7	4.9	5.2	5.4	4.7	5.3	5.5	5.8	6.1	5.4	6.1	6.3	6.6	7.0	7.0	7.9	8.3	8.7	9.1	9.0	10.2	10.7	11.2	11.8
0	−15	3.4	3.9	4.0	4.2	4.4	3.9	4.4	4.6	4.8	5.0	4.5	5.1	5.4	5.6	5.9	6.0	6.8	7.1	7.5	7.8	7.9	9.0	9.4	9.9	10.4
	−10	2.4	2.7	2.9	3.0	3.2	2.8	3.2	3.4	3.5	3.7	3.4	3.9	4.1	4.3	4.5	4.8	5.5	5.7	6.0	6.3	6.5	7.4	7.8	8.1	8.5
	−5	1.5	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.4	2.6	2.5	2.8	3.0	3.1	3.3	3.8	4.3	4.5	4.7	4.9	5.3	6.0	6.3	6.6	7.0
	0	0.8	0.9	1.0	1.0	1.1	1.1	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.1	2.3	2.8	3.3	3.4	3.6	3.8	4.3	4.9	5.1	5.4	5.7
	5	0.1	0.2	0.2	0.3	0.3	0.5	0.6	0.6	0.7	0.7	0.9	1.1	1.2	1.3	1.4	2.1	2.4	2.5	2.6	2.8	3.4	3.9	4.1	4.3	4.5
	10	−0.5	−0.5	−0.5	−0.5	−0.4	−0.2	−0.1	−0.1	−0.1	0.0	0.3	0.4	0.4	0.5	0.5	1.3	1.6	1.7	1.8	1.9	2.6	3.0	3.2	3.3	3.5

525AFM-06-00

Figure 4-39 (Sheet 4)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	3.8	4.2	4.4	4.6	4.8	3.9	4.5	4.6	4.9	5.1	4.2	4.7	4.9	5.1	5.4	4.4	5.0	5.2	5.4	5.7	4.6	5.2	5.5	5.7	6.0
2	-30	3.6	4.0	4.2	4.4	4.6	3.8	4.3	4.4	4.6	4.9	4.0	4.5	4.7	4.9	5.1	4.2	4.8	5.0	5.2	5.4	4.5	5.0	5.3	5.5	5.8
0	-25	3.2	3.6	3.7	3.9	4.1	3.4	3.8	4.0	4.1	4.3	3.6	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	4.9	4.0	4.6	4.8	5.0	5.2
0	-20	2.7	3.0	3.2	3.3	3.5	2.9	3.2	3.4	3.5	3.7	3.1	3.5	3.6	3.8	4.0	3.3	3.7	3.9	4.1	4.2	3.5	4.0	4.1	4.3	4.5
0	-15	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.6	2.7	2.3	2.6	2.7	2.8	3.0	2.5	2.8	2.9	3.1	3.2	2.7	3.0	3.2	3.3	3.5
	-10	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.4	1.6	1.7	1.7	1.8	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3
	-5	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3
	0	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4
	5	-1.0	-1.0	-1.0	-1.0	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3
	10	-1.6	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.1	-1.1
1	-35	3.3	3.7	3.9	4.1	4.3	3.5	3.9	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.8	5.1	4.2	4.7	4.9	5.1	5.4
3	-30	3.1	3.5	3.7	3.8	4.0	3.3	3.7	3.9	4.1	4.2	3.5	4.0	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8	4.0	4.5	4.7	4.9	5.1
0	-25	2.7	3.1	3.2	3.3	3.5	2.9	3.3	3.4	3.6	3.7	3.1	3.5	3.7	3.8	4.0	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6
0	-20	2.2	2.6	2.7	2.8	2.9	2.4	2.7	2.9	3.0	3.1	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	3.9
0	-15	1.4	1.7	1.8	1.8	1.9	1.6	1.9	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.9
	-10	0.6	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.4	1.5	1.3	1.5	1.6	1.7	1.8
	-5	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7
	0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.7	-0.7	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1
	5	-1.3	-1.4	-1.4	-1.4	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8
	10	-1.9	-2.0	-2.0	-2.1	-2.1	-1.8	-1.9	-1.9	-1.9	-2.0	-1.6	-1.7	-1.8	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.7	-1.4	-1.4	-1.4	-1.5	-1.5
1	-35	2.9	3.3	3.4	3.5	3.7	3.1	3.5	3.6	3.8	3.9	3.3	3.7	3.9	4.0	4.2	3.5	3.9	4.1	4.3	4.5	3.7	4.2	4.4	4.6	4.8
4	-30	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.0	3.4	3.6	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.5	3.9	4.1	4.2	4.4
0	-25	2.3	2.6	2.7	2.8	3.0	2.5	2.8	2.9	3.0	3.2	2.7	3.0	3.1	3.3	3.4	2.9	3.2	3.4	3.5	3.7	3.1	3.5	3.6	3.8	4.0
0	-20	1.8	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.7	2.8	2.3	2.6	2.8	2.9	3.0	2.5	2.9	3.0	3.1	3.3
0	-15	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.3	1.6	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3
	-10	0.2	0.3	0.3	0.4	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.7	0.8	0.9	0.9	1.0	0.9	1.0	1.1	1.1	1.2
	-5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3
	0	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5
	5	-1.7	-1.8	-1.8	-1.8	-1.9	-1.6	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.5	-1.6	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2
	10	-2.2	-2.3	-2.4	-2.4	-2.5	-2.1	-2.2	-2.2	-2.3	-2.3	-1.9	-2.1	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.7	-1.8	-1.8	-1.8	-1.9
1	-35	2.0	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.9	3.0	2.5	2.8	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.5
6	-30	1.7	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.9	2.4	2.7	2.8	3.0	3.1
0	-25	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.1	2.2	1.9	2.1	2.2	2.3	2.5	2.1	2.4	2.5	2.6	2.7
0	-20	0.9	1.0	1.1	1.2	1.2	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.5	1.6	1.6	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1
0	-15	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9	1.0	0.8	1.0	1.0	1.1	1.2
	-10	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2
	-5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7
	0	-1.8	-1.9	-1.9	-2.0	-2.0	-1.7	-1.8	-1.8	-1.8	-1.9	-1.6	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.3	-1.3	-1.3	-1.4	-1.4
	5	-2.3	-2.5	-2.5	-2.6	-2.6	-2.2	-2.3	-2.4	-2.4	-2.5	-2.1	-2.2	-2.3	-2.3	-2.4	-2.0	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-2.0	-2.0	-2.0
	10	-2.8	-2.9	-3.0	-3.1	-3.2	-2.7	-2.8	-2.9	-3.0	-3.0	-2.6	-2.7	-2.8	-2.8	-2.9	-2.4	-2.6	-2.6	-2.7	-2.8	-2.3	-2.5	-2.5	-2.6	-2.6
1	-35	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.8	1.9	2.0	1.7	2.0	2.1	2.2	2.3
8	-30	0.8	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.4	1.5	1.3	1.5	1.6	1.6	1.7	1.5	1.7	1.8	1.9	2.0
0	-25	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.0	1.1	1.0	1.1	1.2	1.3	1.3	1.1	1.3	1.4	1.5	1.6
0	-20	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.8	0.9	1.0	1.0
0	-15	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.2
	-10	-1.3	-1.3	-1.4	-1.4	-1.4	-1.2	-1.2	-1.2	-1.2	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7
	-5	-1.9	-2.0	-2.0	-2.0	-2.1	-1.8	-1.9	-1.9	-1.9	-2.0	-1.6	-1.7	-1.7	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.6	-1.4	-1.4	-1.4	-1.5	-1.5
	0	-2.4	-2.6	-2.6	-2.7	-2.8	-2.3	-2.5	-2.5	-2.6	-2.6	-2.2	-2.4	-2.4	-2.4	-2.5	-2.1	-2.2	-2.3	-2.3	-2.4	-2.0	-2.1	-2.1	-2.2	-2.2
	5	-2.9	-3.1	-3.2	-3.3	-3.3	-2.8	-3.0	-3.1	-3.2	-3.2	-2.7	-2.9	-3.0	-3.0	-3.1	-2.6	-2.8	-2.8	-2.9	-3.0	-2.5	-2.6	-2.7	-2.8	-2.8
	10	-3.4	-3.7	-3.7	-3.8	-3.9	-3.3	-3.6	-3.6	-3.7	-3.8	-3.2	-3.5	-3.5	-3.6	-3.7	-3.1	-3.3	-3.4	-3.5	-3.6	-3.0	-3.2	-3.3	-3.4	-3.5

525AFM-06-00

Figure 4-39 (Sheet 5)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2

SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS -10	0	10	20	30	11000 WIND KNOTS -10	0	10	20	30	10500 WIND KNOTS -10	0	10	20	30	9500 WIND KNOTS -10	0	10	20	30	8500 WIND KNOTS -10	0	10	20	30
1	-35	4.9	5.5	5.8	6.0	6.3	5.4	6.1	6.4	6.7	7.0	6.1	6.9	7.3	7.6	7.9	7.9	8.9	9.3	9.7	10.2	10.0	11.3	11.8	12.4	13.0
2	-30	4.7	5.3	5.6	5.8	6.1	5.2	5.9	6.2	6.5	6.8	6.0	6.7	7.0	7.3	7.7	7.7	8.7	9.0	9.5	9.9	9.8	11.1	11.5	12.1	12.7
0	-25	4.3	4.8	5.0	5.3	5.5	4.8	5.4	5.6	5.9	6.2	5.5	6.2	6.5	6.7	7.1	7.1	8.0	8.4	8.8	9.2	9.2	10.4	10.8	11.3	11.9
0	-20	3.7	4.2	4.4	4.6	4.8	4.2	4.8	5.0	5.2	5.5	4.9	5.5	5.8	6.0	6.3	6.4	7.3	7.6	8.0	8.3	8.4	9.5	10.0	10.4	10.9
0	-15	2.9	3.3	3.4	3.6	3.8	3.3	3.8	4.0	4.1	4.3	4.0	4.5	4.7	4.9	5.1	5.4	6.1	6.4	6.7	7.0	7.2	8.2	8.6	9.0	9.4
	-10	1.9	2.2	2.3	2.5	2.6	2.4	2.7	2.8	3.0	3.1	2.9	3.3	3.5	3.7	3.9	4.3	4.9	5.1	5.3	5.6	5.9	6.7	7.0	7.4	7.7
	-5	1.1	1.3	1.4	1.4	1.5	1.5	1.7	1.8	1.9	2.0	2.0	2.3	2.4	2.6	2.7	3.2	3.7	3.9	4.1	4.3	4.7	5.4	5.7	5.9	6.2
	0	0.4	0.5	0.5	0.6	0.6	0.7	0.9	0.9	1.0	1.1	1.2	1.4	1.5	1.6	1.7	2.4	2.7	2.9	3.0	3.2	3.8	4.3	4.5	4.8	5.0
	5	-0.3	-0.2	-0.2	-0.2	-0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.7	0.7	0.8	0.9	1.6	1.9	2.0	2.1	2.2	2.9	3.4	3.5	3.7	3.9
	10	-0.9	-0.9	-0.9	-0.9	-0.9	-0.5	-0.5	-0.5	-0.5	-0.5	-0.1	0.0	0.0	0.0	0.1	0.9	1.1	1.2	1.2	1.3	2.1	2.5	2.6	2.7	2.9
1	-35	4.4	5.0	5.2	5.4	5.7	4.9	5.6	5.8	6.1	6.3	5.6	6.3	6.6	6.9	7.2	7.3	8.2	8.6	9.0	9.4	9.3	10.6	11.0	11.5	12.1
3	-30	4.2	4.8	5.0	5.2	5.4	4.7	5.3	5.6	5.8	6.1	5.4	6.1	6.4	6.6	7.0	7.0	7.9	8.3	8.7	9.1	9.1	10.3	10.7	11.2	11.7
0	-25	3.8	4.3	4.4	4.6	4.9	4.3	4.8	5.0	5.2	5.5	4.9	5.6	5.8	6.1	6.3	6.5	7.3	7.6	8.0	8.4	8.5	9.6	10.0	10.5	11.0
0	-20	3.3	3.7	3.9	4.0	4.2	3.7	4.2	4.4	4.6	4.8	4.4	5.0	5.2	5.4	5.7	5.9	6.6	6.9	7.2	7.6	7.8	8.8	9.2	9.6	10.1
0	-15	2.4	2.7	2.9	3.0	3.1	2.9	3.2	3.4	3.5	3.7	3.5	3.9	4.1	4.3	4.5	4.8	5.5	5.7	6.0	6.3	6.6	7.4	7.8	8.1	8.5
	-10	1.5	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.4	2.5	2.4	2.8	2.9	3.1	3.2	3.7	4.2	4.4	4.6	4.9	5.3	6.0	6.3	6.6	6.9
	-5	0.6	0.8	0.8	0.9	1.0	1.0	1.2	1.3	1.4	1.4	1.5	1.8	1.9	2.0	2.1	2.7	3.1	3.3	3.4	3.6	4.2	4.8	5.0	5.2	5.5
	0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.5	0.5	0.6	0.8	1.0	1.0	1.1	1.2	1.9	2.2	2.3	2.4	2.6	3.3	3.7	3.9	4.1	4.3
	5	-0.6	-0.6	-0.6	-0.6	-0.6	-0.3	-0.2	-0.2	-0.2	-0.2	0.1	0.2	0.3	0.3	0.4	1.2	1.4	1.5	1.6	1.7	2.5	2.8	3.0	3.1	3.3
	10	-1.2	-1.3	-1.3	-1.3	-1.3	-0.9	-0.9	-0.9	-0.9	-0.9	-0.5	-0.5	-0.4	-0.4	-0.4	0.5	0.6	0.7	0.7	0.8	1.7	2.0	2.1	2.2	2.3
1	-35	4.0	4.5	4.6	4.9	5.1	4.4	5.0	5.2	5.5	5.7	5.1	5.8	6.0	6.3	6.6	6.7	7.6	7.9	8.2	8.6	8.7	9.8	10.3	10.7	11.2
4	-30	3.7	4.2	4.3	4.5	4.7	4.2	4.7	4.9	5.1	5.4	4.8	5.4	5.7	5.9	6.2	6.4	7.2	7.5	7.8	8.2	8.3	9.4	9.8	10.3	10.8
0	-25	3.3	3.7	3.9	4.1	4.3	3.8	4.3	4.4	4.6	4.9	4.4	5.0	5.2	5.4	5.7	5.9	6.7	7.0	7.3	7.6	7.8	8.8	9.2	9.6	10.1
0	-20	2.8	3.1	3.3	3.4	3.6	3.2	3.6	3.8	4.0	4.1	3.8	4.3	4.5	4.7	4.9	5.2	5.9	6.2	6.5	6.8	7.0	7.9	8.3	8.7	9.1
0	-15	1.9	2.2	2.3	2.4	2.5	2.4	2.7	2.8	2.9	3.1	2.9	3.3	3.5	3.6	3.8	4.3	4.8	5.0	5.3	5.5	5.9	6.7	7.0	7.3	7.7
	-10	1.0	1.2	1.3	1.4	1.4	1.4	1.7	1.7	1.8	1.9	2.0	2.3	2.4	2.5	2.6	3.2	3.6	3.8	4.0	4.2	4.7	5.3	5.6	5.9	6.2
	-5	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.4	1.5	1.5	2.2	2.6	2.7	2.8	3.0	3.6	4.2	4.4	4.6	4.8
	0	-0.4	-0.4	-0.3	-0.3	-0.3	-0.1	0.0	0.0	0.1	0.1	0.4	0.5	0.6	0.6	0.7	1.5	1.7	1.8	1.9	2.0	2.8	3.2	3.3	3.5	3.7
	5	-1.0	-1.0	-1.0	-1.0	-1.0	-0.7	-0.7	-0.7	-0.7	-0.7	-0.2	-0.2	-0.2	-0.1	-0.1	0.7	0.9	1.0	1.0	1.1	2.0	2.3	2.4	2.5	2.7
	10	-1.5	-1.6	-1.6	-1.7	-1.7	-1.2	-1.3	-1.3	-1.3	-1.3	-0.8	-0.8	-0.8	-0.8	-0.8	0.1	0.2	0.2	0.3	0.3	1.2	1.5	1.6	1.7	1.8
1	-35	2.9	3.3	3.5	3.6	3.8	3.4	3.8	4.0	4.2	4.4	4.0	4.5	4.7	4.9	5.2	5.5	6.1	6.4	6.7	7.0	7.3	8.2	8.6	8.9	9.4
6	-30	2.6	3.0	3.1	3.2	3.4	3.1	3.5	3.6	3.8	3.9	3.7	4.1	4.3	4.5	4.7	5.1	5.7	6.0	6.2	6.5	6.8	7.7	8.0	8.4	8.8
0	-25	2.3	2.6	2.7	2.8	3.0	2.7	3.1	3.2	3.3	3.5	3.3	3.7	3.9	4.1	4.2	4.7	5.3	5.5	5.7	6.0	6.4	7.2	7.5	7.8	8.2
0	-20	1.8	2.0	2.1	2.2	2.4	2.2	2.5	2.6	2.7	2.9	2.8	3.1	3.3	3.4	3.6	4.1	4.6	4.8	5.0	5.3	5.7	6.4	6.7	7.0	7.4
0	-15	1.0	1.2	1.3	1.3	1.4	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.4	2.6	3.2	3.6	3.7	3.9	4.1	4.7	5.3	5.5	5.8	6.1
	-10	0.2	0.3	0.3	0.4	0.4	0.6	0.7	0.7	0.8	0.9	1.0	1.2	1.3	1.4	1.5	2.2	2.5	2.6	2.7	2.9	3.6	4.1	4.2	4.5	4.7
	-5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.2	-0.1	-0.1	-0.1	-0.1	0.3	0.4	0.4	0.5	0.5	1.3	1.5	1.6	1.7	1.8	2.6	3.0	3.1	3.3	3.5
	0	-1.1	-1.2	-1.2	-1.2	-1.2	-0.8	-0.8	-0.8	-0.8	-0.8	-0.4	-0.3	-0.3	-0.3	-0.3	0.6	0.7	0.8	0.9	0.9	1.8	2.1	2.2	2.3	2.4
	5	-1.7	-1.8	-1.8	-1.8	-1.9	-1.4	-1.5	-1.5	-1.5	-1.5	-1.0	-1.0	-1.0	-1.0	-1.0	-0.1	0.0	0.0	0.0	0.1	1.0	1.2	1.3	1.4	1.5
	10	-2.2	-2.3	-2.4	-2.4	-2.5	-1.9	-2.0	-2.1	-2.1	-2.1	-1.5	-1.6	-1.6	-1.7	-1.7	-0.7	-0.7	-0.7	-0.7	-0.7	0.4	0.5	0.5	0.6	0.7
1	-35	1.9	2.2	2.3	2.4	2.5	2.3	2.6	2.8	2.9	3.0	2.9	3.3	3.4	3.6	3.7	4.2	4.8	5.0	5.2	5.4	5.8	6.6	6.9	7.2	7.5
8	-30	1.7	1.9	2.0	2.1	2.2	2.1	2.4	2.5	2.6	2.7	2.6	3.0	3.1	3.3	3.4	3.9	4.4	4.6	4.8	5.1	5.5	6.2	6.5	6.8	7.1
0	-25	1.3	1.5	1.6	1.7	1.8	1.7	2.0	2.1	2.2	2.3	2.3	2.6	2.7	2.8	2.9	3.5	4.0	4.2	4.3	4.5	5.1	5.7	6.0	6.2	6.5
0	-20	0.9	1.0	1.1	1.2	1.2	1.3	1.5	1.5	1.6	1.7	1.8	2.0	2.1	2.2	2.4	3.0	3.4	3.5	3.7	3.9	4.5	5.1	5.3	5.5	5.8
0	-15	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.3	1.3	1.4	2.1	2.4	2.6	2.7	2.8	3.5	4.0	4.2	4.4	4.6
	-10	-0.6	-0.6	-0.6	-0.5	-0.5	-0.3	-0.2	-0.2	-0.2	-0.1	0.2	0.3	0.3	0.4	0.4	1.2	1.4	1.5	1.6	1.7	2.5	2.9	3.0	3.2	3.3
	-5	-1.2	-1.3	-1.3	-1.3	-1.3	-0.9	-0.9	-0.9	-0.9	-0.9	-0.5	-0.5	-0.5	-0.4	-0.4	0.5	0.6	0.7	0.7	0.8	1.7	1.9	2.0	2.1	2.3
	0	-1.8	-1.9	-2.0	-2.0	-2.0	-1.6	-1.6	-1.6	-1.7	-1.7	-1.2	-1.2	-1.2	-1.2	-1.2	-0.3	-0.2	-0.2	-0.2	-0.1	0.8	1.0	1.1	1.1	1.2
	5	-2.4	-2.5	-2.6	-2.6	-2.7	-2.1	-2.2	-2.3	-2.3	-2.4	-1.7	-1.8	-1.9	-1.9	-1.9	-0.9	-0.9	-0.9	-0.9	-0.9	0.1	0.2	0.2	0.3	0.3
	10	-2.9	-3.1	-3.2	-3.2	-3.3	-2.7	-2.8	-2.9	-3.0	-3.0	-2.3	-2.5	-2.5	-2.6	-2.6	-1.6	-1.6	-1.7	-1.7	-1.7	-0.6	-0.6	-0.6	-0.6	-0.6

525AFM-08-00

Figure 4-39 (Sheet 6)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		12375					12200					12000					11800					11600					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
0	-25	4.5	5.2	5.5	5.9	6.2	4.7	5.5	5.8	6.2	6.5	5.0	5.8	6.1	6.5	6.9	5.2	6.1	6.4	6.8	7.2	5.5	6.4	6.8	7.2	7.6	
	-20	4.5	5.3	5.6	5.9	6.2	4.7	5.5	5.8	6.2	6.5	5.0	5.8	6.1	6.5	6.9	5.3	6.1	6.5	6.8	7.2	5.5	6.4	6.8	7.2	7.6	
	-15	4.5	5.3	5.6	5.9	6.2	4.8	5.5	5.8	6.2	6.5	5.0	5.8	6.1	6.5	6.9	5.3	6.1	6.5	6.8	7.3	5.5	6.4	6.8	7.2	7.6	
	-10	4.6	5.3	5.6	5.9	6.2	4.8	5.5	5.8	6.2	6.5	5.0	5.8	6.2	6.5	6.9	5.3	6.1	6.5	6.9	7.3	5.6	6.5	6.8	7.2	7.6	
	-5	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.5	6.9	5.3	6.2	6.5	6.9	7.3	5.6	6.5	6.8	7.2	7.6	
	0	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.5	6.9	5.3	6.2	6.5	6.9	7.3	5.6	6.5	6.8	7.2	7.7	
	5	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	6.9	5.4	6.2	6.5	6.9	7.3	5.6	6.5	6.9	7.3	7.7	
	10	4.7	5.4	5.6	6.0	6.3	4.9	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	6.9	5.4	6.2	6.6	6.9	7.3	5.7	6.5	6.9	7.3	7.7	
	15	4.7	5.4	5.7	6.0	6.3	4.9	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.6	6.9	7.3	5.7	6.6	6.9	7.3	7.7	
	20	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.4	6.3	6.6	6.9	7.3	5.7	6.6	6.9	7.3	7.7	
	25	4.4	5.1	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	6.9	5.4	6.2	6.6	6.9	7.3	
	30	3.6	4.2	4.4	4.7	4.9	3.9	4.4	4.7	4.9	5.2	4.1	4.7	5.0	5.2	5.5	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	
	35	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.3	4.5	3.5	4.1	4.3	4.6	4.8	3.8	4.4	4.6	4.9	5.2	
	40	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.2	3.4	2.7	3.2	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.1	
	45	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4	1.9	2.2	2.4	2.5	2.7	2.1	2.5	2.6	2.8	3.0	
	50	0.6	0.7	0.8	0.9	0.9	0.7	0.9	1.0	1.1	1.1	0.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.7	1.3	1.6	1.7	1.8	1.9	
	55	-0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.7	0.7	0.6	0.8	0.8	0.9	1.0	
1	-25	4.4	5.1	5.4	5.7	6.1	4.6	5.4	5.7	6.0	6.4	4.9	5.7	6.0	6.3	6.7	5.1	6.0	6.3	6.7	7.1	5.4	6.3	6.6	7.0	7.4	
0	-20	4.4	5.1	5.4	5.7	6.1	4.6	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7	5.1	6.0	6.3	6.7	7.1	5.4	6.3	6.6	7.0	7.4	
0	-15	4.4	5.1	5.4	5.7	6.1	4.6	5.4	5.7	6.0	6.4	4.9	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.7	7.1	5.4	6.3	6.6	7.0	7.4	
0	-10	4.5	5.2	5.4	5.7	6.1	4.7	5.4	5.7	6.0	6.4	4.9	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.7	7.1	5.5	6.3	6.7	7.0	7.4	
	-5	4.5	5.2	5.5	5.8	6.1	4.7	5.4	5.7	6.0	6.4	4.9	5.7	6.0	6.4	6.7	5.2	6.0	6.3	6.7	7.1	5.5	6.3	6.7	7.0	7.5	
	0	4.5	5.2	5.5	5.8	6.1	4.7	5.4	5.7	6.0	6.4	5.0	5.7	6.0	6.4	6.7	5.2	6.0	6.4	6.7	7.1	5.5	6.4	6.7	7.1	7.5	
	5	4.5	5.2	5.5	5.8	6.1	4.7	5.5	5.8	6.1	6.4	5.0	5.8	6.1	6.4	6.8	5.3	6.1	6.4	6.7	7.1	5.5	6.4	6.7	7.1	7.5	
	10	4.5	5.2	5.5	5.8	6.1	4.7	5.5	5.8	6.1	6.4	5.0	5.8	6.1	6.4	6.7	5.3	6.1	6.4	6.7	7.1	5.5	6.4	6.7	7.1	7.5	
	15	4.4	5.1	5.4	5.6	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.2	6.6	5.2	5.9	6.2	6.6	7.0	5.4	6.3	6.6	6.9	7.3	
	20	4.2	4.8	5.1	5.4	5.7	4.4	5.1	5.3	5.6	5.9	4.7	5.4	5.6	5.9	6.3	4.9	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	
	25	3.8	4.4	4.6	4.8	5.1	4.0	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.7	5.5	5.7	6.0	6.4	
	30	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.5	4.8	3.8	4.4	4.6	4.8	5.1	4.0	4.6	4.9	5.1	5.4	
	35	2.4	2.8	2.9	3.1	3.3	2.6	3.0	3.2	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	
	40	1.6	1.9	2.0	2.1	2.3	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.5	2.6	2.8	2.2	2.6	2.7	2.9	3.1	2.4	2.8	3.0	3.2	3.4	
	45	0.8	1.0	1.1	1.2	1.3	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.8	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.2	2.3	
	50	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.6	0.8	0.9	1.0	1.1	0.8	1.0	1.1	1.2	1.3	
	52	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.4	0.4	0.5	0.5	0.4	0.6	0.6	0.7	0.8	
2	-25	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.5	6.9	5.3	6.2	6.5	6.9	7.3	
0	-20	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	6.9	5.3	6.2	6.5	6.9	7.3	
0	-15	4.4	5.1	5.3	5.6	6.0	4.6	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.5	6.9	7.3	
0	-10	4.4	5.1	5.3	5.6	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.6	6.9	7.3	
	-5	4.4	5.1	5.4	5.7	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.3	6.6	5.2	5.9	6.3	6.6	7.0	5.4	6.3	6.6	6.9	7.3	
	0	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.6	6.0	6.3	4.9	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4	
	5	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4	
	10	4.5	5.2	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.7	7.0	5.5	6.3	6.6	7.0	7.4	
	15	4.2	4.8	5.1	5.3	5.6	4.4	5.1	5.3	5.6	5.9	4.7	5.4	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.6	5.2	6.0	6.3	6.6	7.0	
	20	3.8	4.3	4.6	4.8	5.1	4.0	4.6	4.8	5.1	5.3	4.2	4.9	5.1	5.4	5.7	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.4	
	25	3.2	3.7	3.9	4.1	4.3	3.4	3.9	4.1	4.4	4.6	3.6	4.2	4.4	4.7	4.9	3.9	4.5	4.7	5.0	5.2	4.1	4.8	5.0	5.3	5.6	
	30	2.6	3.0	3.2	3.4	3.6	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	3.5	4.1	4.3	4.5	4.8	
	35	1.9	2.2	2.3	2.5	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.3	3.4	2.7	3.2	3.3	3.5	3.7	
	40	1.1	1.4	1.5	1.6	1.7	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4	1.9	2.3	2.4	2.5	2.7	
	45	0.4	0.5	0.6	0.6	0.7	0.5	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.1	1.1	0.9	1.1	1.2	1.3	1.4	1.1	1.4	1.4	1.5	1.7	
	50	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	
3	-30	4.4	5.1	5.3	5.6	6.0	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.6	6.9	7.3	
0	-25	4.4	5.1	5.3	5.6	6.0	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.6	6.9	7.3	
0	-20	4.4	5.1	5.3	5.6	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.2	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.6	6.9	7.3	
0	-15	4.4	5.1	5.4	5.7	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.3	6.6	5.1	5.9	6.2	6.6	7.0	5.4	6.2	6.6	6.9	7.3	
	-10	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.6	5.9	6.3	4.9	5.7	5.9	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.4	6.3	6.6	7.0	7.3	
	-5	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4	
	0	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.6	5.9	6.3	4.9	5.7	5.9	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	6.9	7.3	
	5	4.3	4.9	5.2	5.5	5.8	4.5	5.2	5.4	5.7	6.0	4.8	5.5	5.7	6.0	6.4	5.0	5.8	6.1	6.4	6.7	5.3	6.1	6.4	6.7	7.1	
	10	4.0	4.6	4.9	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.8	5.5	5.7	6.0	6.4	5.0	5.8	6.1	6.4	6.7	
	15	3.7	4.2	4.5	4.7	4.9	3.9	4.5	4.7	5.0	5.2	4.1	4.8	5.0	5.3	5.5	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	
	20	3.2	3.7	3.9	4.1	4.4	3.4	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.7	4.9	3.9	4.5	4.7	5.0	5.3	4.2	4.8	5.0	5.3	5.6	
	25	2.7	3.2	3.3	3.5	3.7	2.9	3.4	3.6	3.7	4.0	3.1	3.6	3.8	4.0	4.3	3.4	3.9	4.1	4.3	4.6	3.6	4.2	4.4	4.6	4.9	
	30	2.2	2.5	2.7	2.8	3.0	2.4	2.7	2.9	3.1	3.2	2.6	3.0	3.2	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	
	35	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.5	2.6	2.8	2.2	2.6	2.7	2.9	3.1	
	40	0.7	0.8	0.9	1.0	1.1	0.8	1.0	1.1	1.2	1.3	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.6	1.7	1.8	1.4	1.7	1.8	1.9	2.0	
	45	-0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.7	0.8	0.9	1.0	1.1	
	48	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.4	

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Figure 4-40 (Sheet 1 of 8)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-25	5.8	6.7	7.1	7.5	8.0	6.4	7.4	7.9	8.3	8.9	7.2	8.4	8.9	9.4	10.0	9.2	10.7	11.3	12.0	12.8	11.6	13.5	14.3	15.2	16.1
	-20	5.8	6.8	7.1	7.6	8.0	6.4	7.4	7.9	8.3	8.9	7.2	8.4	8.9	9.4	10.0	9.2	10.7	11.4	12.0	12.8	11.7	13.6	14.3	15.2	16.1
	-15	5.8	6.8	7.1	7.6	8.0	6.4	7.5	7.9	8.3	8.9	7.2	8.4	8.9	9.4	10.0	9.3	10.8	11.4	12.0	12.8	11.7	13.6	14.3	15.2	16.1
	-10	5.8	6.8	7.2	7.6	8.0	6.4	7.5	7.9	8.4	8.9	7.2	8.4	8.9	9.4	10.0	9.3	10.8	11.4	12.0	12.8	11.7	13.6	14.4	15.2	16.1
	-5	5.9	6.8	7.2	7.6	8.0	6.5	7.5	7.9	8.4	8.9	7.3	8.4	8.9	9.4	10.0	9.3	10.8	11.4	12.1	12.8	11.8	13.6	14.4	15.2	16.1
	0	5.9	6.8	7.2	7.6	8.1	6.5	7.5	7.9	8.4	8.9	7.3	8.5	8.9	9.4	10.0	9.4	10.8	11.4	12.1	12.8	11.8	13.7	14.4	15.2	16.1
	5	5.9	6.8	7.2	7.6	8.1	6.5	7.5	8.0	8.4	8.9	7.3	8.5	9.0	9.5	10.0	9.4	10.9	11.4	12.1	12.8	11.9	13.7	14.4	15.2	16.1
	10	6.0	6.9	7.2	7.6	8.1	6.5	7.6	8.0	8.4	8.9	7.4	8.5	9.0	9.5	10.0	9.4	10.9	11.5	12.1	12.8	11.9	13.7	14.4	15.2	16.1
	15	6.0	6.9	7.2	7.6	8.1	6.6	7.6	8.0	8.4	8.9	7.4	8.5	9.0	9.5	10.0	9.5	10.9	11.5	12.1	12.8	11.9	13.7	14.5	15.3	16.1
	20	6.0	6.9	7.3	7.7	8.1	6.6	7.6	8.0	8.4	8.9	7.4	8.6	9.0	9.5	10.1	9.5	10.9	11.5	12.1	12.8	12.0	13.8	14.5	15.3	16.2
	25	5.7	6.6	6.9	7.3	7.7	6.3	7.2	7.6	8.0	8.5	7.1	8.2	8.6	9.1	9.6	9.1	10.5	11.0	11.6	12.3	11.6	13.3	14.0	14.7	15.6
	30	4.9	5.6	5.9	6.2	6.6	5.4	6.3	6.6	7.0	7.4	6.2	7.1	7.5	7.9	8.4	8.0	9.3	9.8	10.3	10.9	10.4	12.0	12.6	13.3	14.1
	35	4.0	4.7	4.9	5.2	5.5	4.6	5.3	5.6	5.9	6.2	5.3	6.1	6.4	6.8	7.2	7.0	8.1	8.5	9.0	9.5	9.2	10.6	11.2	11.8	12.6
	40	3.2	3.7	3.9	4.1	4.4	3.7	4.3	4.5	4.8	5.1	4.4	5.1	5.3	5.6	6.0	5.9	6.9	7.3	7.7	8.2	7.9	9.2	9.7	10.3	10.9
	45	2.3	2.7	2.9	3.1	3.3	2.8	3.3	3.5	3.7	3.9	3.4	4.0	4.2	4.5	4.8	4.9	5.7	6.1	6.4	6.8	6.8	7.9	8.3	8.8	9.4
	50	1.5	1.8	1.9	2.1	2.2	2.0	2.3	2.5	2.6	2.8	2.6	3.0	3.2	3.4	3.6	4.0	4.6	4.9	5.2	5.5	5.7	6.6	7.0	7.4	7.9
	55	0.8	1.0	1.1	1.1	1.2	1.2	1.4	1.6	1.7	1.8	1.8	2.1	2.2	2.4	2.5	3.1	3.6	3.8	4.0	4.3	4.7	5.5	5.8	6.1	6.5
1	-25	5.7	6.6	7.0	7.4	7.8	6.3	7.3	7.7	8.1	8.7	7.0	8.2	8.7	9.2	9.8	9.1	10.5	11.1	11.8	12.5	11.5	13.3	14.1	14.9	15.8
0	-20	5.7	6.6	7.0	7.4	7.8	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.7	9.2	9.8	9.1	10.5	11.1	11.8	12.5	11.5	13.3	14.1	14.9	15.8
0	-15	5.7	6.6	7.0	7.4	7.8	6.3	7.3	7.7	8.2	8.7	7.1	8.2	8.7	9.2	9.8	9.1	10.6	11.2	11.8	12.5	11.6	13.4	14.1	14.9	15.8
0	-10	5.7	6.6	7.0	7.4	7.8	6.3	7.3	7.7	8.2	8.7	7.1	8.3	8.7	9.2	9.8	9.1	10.6	11.2	11.8	12.5	11.6	13.4	14.1	14.9	15.8
	-5	5.8	6.7	7.0	7.4	7.8	6.4	7.3	7.7	8.2	8.7	7.2	8.3	8.7	9.2	9.8	9.2	10.6	11.2	11.8	12.5	11.6	13.4	14.2	15.0	15.8
	0	5.8	6.7	7.0	7.4	7.9	6.4	7.4	7.8	8.2	8.7	7.2	8.3	8.8	9.3	9.8	9.2	10.7	11.2	11.9	12.6	11.7	13.5	14.2	15.0	15.9
	5	5.8	6.7	7.1	7.5	7.9	6.4	7.4	7.8	8.2	8.7	7.2	8.3	8.8	9.3	9.8	9.3	10.7	11.3	11.9	12.6	11.7	13.5	14.2	15.0	15.9
	10	5.8	6.7	7.1	7.4	7.9	6.4	7.4	7.8	8.2	8.7	7.2	8.3	8.8	9.3	9.8	9.3	10.7	11.2	11.9	12.6	11.7	13.5	14.2	15.0	15.8
	15	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.6	8.1	8.5	7.1	8.2	8.6	9.1	9.6	9.1	10.5	11.1	11.7	12.3	11.6	13.3	14.0	14.8	15.6
	20	5.5	6.3	6.6	7.0	7.4	6.0	7.0	7.3	7.7	8.2	6.8	7.9	8.3	8.7	9.2	8.8	10.1	10.7	11.3	11.9	11.2	12.9	13.6	14.3	15.1
	25	5.0	5.8	6.1	6.4	6.7	5.6	6.4	6.8	7.1	7.5	6.3	7.3	7.7	8.1	8.6	8.2	9.4	9.9	10.5	11.1	10.6	12.2	12.8	13.5	14.3
	30	4.3	4.9	5.2	5.5	5.8	4.8	5.6	5.8	6.2	6.5	5.5	6.4	6.7	7.1	7.5	7.2	8.4	8.8	9.3	9.9	9.5	11.0	11.6	12.2	12.9
	35	3.5	4.1	4.3	4.5	4.8	4.0	4.6	4.9	5.2	5.5	4.7	5.4	5.7	6.1	6.4	6.3	7.3	7.7	8.1	8.6	8.4	9.7	10.2	10.8	11.5
	40	2.7	3.1	3.3	3.5	3.7	3.1	3.7	3.9	4.1	4.3	3.8	4.4	4.7	4.9	5.2	5.3	6.2	6.5	6.9	7.3	7.2	8.3	8.8	9.3	9.9
	45	1.8	2.1	2.3	2.4	2.6	2.3	2.7	2.8	3.0	3.2	2.9	3.4	3.6	3.8	4.0	4.3	5.0	5.3	5.6	6.0	6.1	7.1	7.5	7.9	8.4
	50	1.0	1.3	1.4	1.5	1.6	1.5	1.8	1.9	2.0	2.1	2.0	2.4	2.6	2.7	2.9	3.4	4.0	4.2	4.4	4.7	5.0	5.9	6.2	6.6	7.0
	52	0.6	0.8	0.9	1.0	1.0	1.0	1.3	1.4	1.5	1.6	1.6	1.9	2.0	2.2	2.3	2.9	3.4	3.6	3.8	4.0	4.5	5.2	5.5	5.9	6.2
2	-25	5.6	6.5	6.9	7.3	7.7	6.2	7.2	7.6	8.0	8.5	7.0	8.1	8.6	9.1	9.6	9.0	10.4	11.0	11.6	12.4	11.4	13.2	13.9	14.8	15.7
0	-20	5.6	6.5	6.9	7.3	7.7	6.2	7.2	7.6	8.0	8.5	7.0	8.1	8.6	9.1	9.6	9.0	10.4	11.0	11.6	12.4	11.4	13.2	14.0	14.8	15.6
0	-15	5.7	6.5	6.9	7.3	7.7	6.2	7.2	7.6	8.0	8.5	7.0	8.2	8.6	9.1	9.6	9.0	10.5	11.0	11.7	12.4	11.5	13.3	14.0	14.8	15.6
0	-10	5.7	6.6	6.9	7.3	7.7	6.3	7.2	7.6	8.1	8.5	7.1	8.2	8.6	9.1	9.6	9.1	10.5	11.1	11.7	12.4	11.5	13.3	14.0	14.8	15.7
	-5	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.5	7.1	8.2	8.6	9.1	9.7	9.1	10.5	11.1	11.7	12.4	11.6	13.3	14.0	14.8	15.7
	0	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.7	9.1	9.7	9.2	10.5	11.1	11.7	12.4	11.6	13.4	14.0	14.8	15.7
	5	5.8	6.6	7.0	7.4	7.8	6.4	7.3	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.2	10.6	11.1	11.7	12.4	11.6	13.4	14.1	14.8	15.7
	10	5.8	6.7	7.0	7.4	7.8	6.4	7.3	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.2	10.6	11.2	11.8	12.4	11.7	13.4	14.1	14.9	15.7
	15	5.5	6.3	6.6	6.9	7.3	6.0	6.9	7.3	7.7	8.1	6.8	7.9	8.3	8.7	9.2	8.8	10.1	10.6	11.2	11.9	11.2	12.9	13.5	14.3	15.1
	20	5.0	5.8	6.0	6.4	6.7	5.6	6.4	6.7	7.1	7.5	6.3	7.3	7.7	8.1	8.5	8.2	9.4	9.9	10.5	11.1	10.6	12.1	12.8	13.5	14.2
	25	4.4	5.1	5.3	5.6	5.9	4.9	5.7	6.0	6.3	6.7	5.7	6.5	6.9	7.3	7.7	7.4	8.5	9.0	9.5	10.0	9.7	11.2	11.8	12.4	13.1
	30	3.8	4.3	4.6	4.8	5.1	4.3	4.9	5.2	5.5	5.8	5.0	5.8	6.1	6.4	6.8	6.6	7.7	8.1	8.5	9.0	8.8	10.1	10.7	11.3	11.9
	35	3.0	3.4	3.6	3.8	4.1	3.5	4.0	4.2	4.5	4.7	4.1	4.8	5.0	5.3	5.6	5.7	6.6	6.9	7.3	7.7	7.6	8.8	9.3	9.8	10.4
	40	2.1	2.5	2.6	2.8	3.0	2.6	3.0	3.2	3.4	3.6	3.2	3.8	4.0	4.2	4.4	4.7	5.4	5.7	6.1	6.4	6.5	7.5	7.9	8.4	8.9
	45	1.3	1.6	1.7	1.8	1.9	1.8	2.1	2.2	2.3	2.5	2.3	2.8	2.9	3.1	3.3	3.7	4.3	4.6	4.8	5.1	5.4	6.3	6.6	7.0	7.5
	50	0.6	0.7	0.8	0.9	1.0	1.0	1.2	1.3	1.4	1.5	1.5	1.8	2.0	2.1	2.2	2.8	3.3	3.5	3.7	4.0	4.4	5.1	5.4	5.8	6.1
3	-30	5.7	6.5	6.9	7.3	7.7	6.2	7.2	7.6	8.1	8.6	7.0	8.2	8.6	9.1	9.7	9.0	10.5	11.1	11.7	12.4	11.5	13.3	14.0	14.8	15.7
0	-25	5.7	6.5	6.9	7.3	7.7	6.2	7.2	7.6	8.1	8.5	7.0	8.2	8.6	9.1	9.7	9.0	10.5	11.0	11.7	12.4	11.5	13.3	14.0	14.8	15.7
0	-20	5.7	6.6	6.9	7.3	7.7	6.3	7.2	7.6	8.1	8.5	7.1	8.2	8.6	9.1	9.6	9.1	10.5	11.1	11.7	12.4	11.5	13.3	14.0	14.8	15.7
0	-15	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.6	8.1	8.5	7.1	8.2	8.6	9.1	9.7	9.1	10.5	11.1	11.7	12.4	11.5	13.3	14.0	14.8	15.7
	-10	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.5	7.1	8.2	8.6	9.1	9.7	9.1	10.5	11.1	11.7	12.4	11.6	13.3	14.0	14.8	15.7
	-5	5.7	6.6	7.0	7.3	7.7	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.7	9.1	9.7	9.2	10.6	11.1	11.7	12.4	11.6	13.4	14.1	14.8	15.7
	0	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.5	7.1	8.2	8.6	9.1	9.6	9.2	10.5	11.1	11.7	12.3	11.6	13.3	14.0	14.8	15.6
	5	5.6	6.4	6.7	7.1	7.5	6.2	7.1	7.4	7.8	8.3	6.9	8.0	8.4	8.9	9.4	8.9	10.3	10.8	11.4	12.0	11.4	13.1	13.7	14.5	15.3
	10	5.3	6.1	6.4	6.7	7.1	5.9	6.7	7.1	7.5	7.9	6.6	7.6	8.0	8.5	9.0	8.6	9.9	10.4	10.9	11.6	11.0	12.6	13.3	14.0	14.8
	15	4.9	5.6	5.9	6.2	6.6	5.5	6.3	6.6	7.0	7.3	6.2	7.2	7.5	7.9	8.4	8.1	9.3	9.8	10.3	10.9	10.4	12.0	12.6	13.3	14.0
	20	4.4	5.1	5.3	5.6	5.9	5.0	5.7	6.0	6.3	6.7	5.7	6.6	6.9	7.3	7.7	7.4	8.5	9.0	9.5	10.0	9.7	11.2	11.8	12.4	13.1
	25	3.9	4.5	4.7	4.9	5.2	4.4	5.1	5.3	5.6	5.9	5.1	5.9	6.2	6.5	6.9	6.8	7.8	8.2	8.7	9.2	8.9	10.3	10.8	11.4	12.1
	30	3.3	3.8	4.0	4.2	4.4	3.8	4.4	4.6	4.8	5.1	4.5	5.2	5.4	5.7	6.0	6.0	7.0	7.3	7.8	8.2	8.1	9.3	9.8	10.4	11.0
	35	2.4	2.9	3.0	3.2	3.4	2.9	3.4	3.6	3.8	4.0	3.6	4.1	4.4	4.6	4.9	5.1	5.9	6.2	6.5	6.9	6.9	8.0	8.4	8.9	9.4
	40	1.6	1.9	2.0	2.2	2.3	2.1	2.4	2.6	2.7	2.9	2.7	3.1	3.3	3.5	3.7	4.1	4.7	5.0	5.3	5.6	5.8	6.7	7.1	7.5	8.0
	45	0.9	1.1	1.1	1.2	1.3	1.3	1.5	1.6	1.7	1.9	1.8	2.2	2.3	2.4	2.6	3.2	3.7	3.9	4.1	4.4	4.8	5.5	5.9	6.2	6.6
	48	0.3	0.5	0.5	0.6	0.6	0.7	0.9	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.9	2.5	3.0	3.1	3.3	3.5	4.1	4.7	5.0	5.3	5.6

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Figure 4-40 (Sheet 2)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
4	-30	4.4	5.1	5.4	5.7	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.3	6.6	5.1	5.9	6.3	6.6	7.0	5.4	6.3	6.6	7.0	7.4
0	-25	4.4	5.1	5.4	5.7	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.3	6.6	5.2	5.9	6.3	6.6	7.0	5.4	6.3	6.6	6.9	7.3
0	-20	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.6	5.9	6.3	4.9	5.7	5.9	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.4	6.3	6.6	7.0	7.3
0	-15	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.6	6.0	6.3	4.9	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
	-10	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
	-5	4.5	5.2	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
	0	4.5	5.1	5.4	5.6	5.9	4.7	5.4	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.6	5.2	5.9	6.2	6.6	6.9	5.5	6.3	6.6	6.9	7.3
	5	4.1	4.7	5.0	5.2	5.5	4.3	5.0	5.2	5.5	5.8	4.6	5.2	5.5	5.8	6.1	4.8	5.5	5.8	6.1	6.5	5.1	5.8	6.1	6.5	6.8
	10	3.6	4.2	4.4	4.6	4.9	3.8	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.8	4.6	5.3	5.5	5.8	6.1
	15	3.2	3.7	3.8	4.0	4.3	3.4	3.9	4.1	4.3	4.5	3.6	4.1	4.4	4.6	4.8	3.8	4.4	4.6	4.9	5.2	4.1	4.7	4.9	5.2	5.5
	20	2.7	3.2	3.3	3.5	3.7	2.9	3.4	3.6	3.7	4.0	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.6	3.6	4.2	4.4	4.6	4.9
	25	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.2	3.7	3.8	4.0	4.3
	30	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.7	2.8	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.1	3.2	3.4
	35	0.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.6	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4
	40	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.7	0.5	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.1	1.1	0.9	1.1	1.2	1.3	1.4
	45	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5
	46	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2
5	-35	4.5	5.2	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.7	7.0	5.5	6.3	6.6	7.0	7.4
0	-30	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
0	-25	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
0	-20	4.5	5.2	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
	-15	4.5	5.2	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.4
	-10	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.5	5.8	6.1	4.9	5.6	5.8	6.1	6.5	5.1	5.9	6.2	6.5	6.8	5.4	6.2	6.5	6.8	7.2
	-5	4.3	4.9	5.1	5.4	5.7	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.3	6.0	6.3	6.7	7.0
	0	4.0	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.6	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7
	5	3.6	4.1	4.3	4.5	4.8	3.8	4.3	4.6	4.8	5.1	4.0	4.6	4.8	5.1	5.4	4.3	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0
	10	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.2	4.4	3.5	4.1	4.3	4.5	4.7	3.8	4.3	4.6	4.8	5.1	4.0	4.6	4.9	5.1	5.4
	15	2.7	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.7	3.9	4.2	3.3	3.8	4.0	4.2	4.5	3.6	4.1	4.3	4.5	4.8
	20	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	2.9	3.4	3.6	3.7	4.0	3.2	3.6	3.8	4.0	4.3
	25	1.9	2.2	2.4	2.5	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7
	30	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.5	2.0	2.3	2.5	2.6	2.7
	35	0.5	0.6	0.7	0.7	0.8	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.2	1.2	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.8
	40	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.6	0.7	0.7	0.8
	44	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0
6	-35	4.5	5.2	5.5	5.8	6.1	4.7	5.4	5.7	6.0	6.4	5.0	5.7	6.0	6.4	6.7	5.2	6.0	6.4	6.7	7.1	5.5	6.4	6.7	7.0	7.4
0	-30	4.5	5.2	5.5	5.7	6.1	4.7	5.4	5.7	6.0	6.4	5.0	5.7	6.0	6.3	6.7	5.3	6.0	6.3	6.7	7.1	5.5	6.3	6.7	7.0	7.4
0	-25	4.5	5.2	5.5	5.7	6.1	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.3	6.0	6.3	6.7	7.0	5.5	6.4	6.7	7.0	7.4
0	-20	4.5	5.2	5.5	5.7	6.1	4.8	5.5	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.3	6.0	6.3	6.7	7.0	5.5	6.4	6.7	7.0	7.4
	-15	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	5.9	6.3	5.0	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	6.9	7.3
	-10	4.3	5.0	5.2	5.5	5.8	4.6	5.2	5.5	5.7	6.0	4.8	5.5	5.8	6.1	6.4	5.1	5.8	6.1	6.4	6.7	5.3	6.1	6.4	6.7	7.1
	-5	4.0	4.6	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.8	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7
	0	3.5	4.1	4.3	4.5	4.7	3.7	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.0	5.3	4.2	4.8	5.1	5.3	5.6	4.5	5.1	5.4	5.7	6.0
	5	3.1	3.5	3.7	3.9	4.1	3.3	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.4	4.7	3.7	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.0	5.3
	10	2.6	3.0	3.2	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.4	4.7
	15	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.2	3.3	3.5	2.8	3.3	3.4	3.6	3.8	3.1	3.5	3.7	3.9	4.1
	20	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.5	2.6	2.7	2.2	2.6	2.7	2.9	3.0	2.4	2.8	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.6
	25	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.4	1.9	2.2	2.4	2.5	2.6	2.1	2.5	2.6	2.8	2.9
	30	0.7	0.8	0.9	1.0	1.0	0.8	1.0	1.1	1.2	1.3	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0
	35	0.0	0.1	0.1	0.2	0.2	0.1	0.3	0.3	0.3	0.4	0.3	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.9	0.7	0.9	0.9	1.0	1.1
	40	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2
	42	-0.9	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2
7	-35	4.6	5.2	5.5	5.8	6.1	4.8	5.5	5.8	6.1	6.4	5.0	5.8	6.1	6.4	6.7	5.3	6.1	6.4	6.7	7.1	5.6	6.4	6.7	7.1	7.5
0	-30	4.5	5.2	5.5	5.7	6.1	4.8	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.3	6.0	6.3	6.7	7.0	5.5	6.4	6.7	7.0	7.4
0	-25	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	5.9	6.3	5.0	5.7	6.0	6.3	6.6	5.2	6.0	6.3	6.6	7.0	5.5	6.3	6.6	6.9	7.3
0	-20	4.4	5.1	5.3	5.6	5.9	4.7	5.3	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.5	5.2	5.9	6.2	6.5	6.9	5.4	6.2	6.5	6.9	7.2
	-15	4.2	4.8	5.1	5.3	5.6	4.4	5.1	5.3	5.6	5.9	4.7	5.4	5.6	5.9	6.2	4.9	5.7	5.9	6.2	6.6	5.2	6.0	6.3	6.6	6.9
	-10	4.0	4.5	4.8	5.0	5.3	4.2	4.8	5.0	5.3	5.5	4.4	5.1	5.3	5.6	5.9	4.7	5.3	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.5
	-5	3.5	4.0	4.2	4.4	4.7	3.7	4.2	4.5	4.7	4.9	3.9	4.5	4.7	5.0	5.2	4.2	4.8	5.0	5.3	5.6	4.5	5.1	5.3	5.6	5.9
	0	3.0	3.5	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.4	4.0	4.1	4.4	4.6	3.7	4.2	4.4	4.7	4.9	3.9	4.5	4.7	5.0	5.2
	5	2.6	2.9	3.1	3.3	3.4	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.4	4.0	4.2	4.4	4.6
	10	2.1	2.5	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.1	3.2	3.4	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0
	15	1.7	2.0	2.1	2.3	2.4	1.9	2.2	2.3	2.5	2.6	2.1	2.5	2.6	2.7	2.9	2.3	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.5
	20	1.4	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4	1.9	2.3	2.4	2.5	2.7	2.2	2.5	2.6	2.8	2.9
	25	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.1	2.2
	30	0.2	0.3	0.3	0.4	0.4	0.3	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.4
	35	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
	40	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.4	-0.4	-0.4	-0.4	-0.3

525AFM-05-01

Figure 4-40 (Sheet 3)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
4	-30	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.6	9.1	9.7	9.1	10.5	11.1	11.7	12.4	11.5	13.3	14.0	14.8	15.7
0	-25	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.6	8.1	8.5	7.1	8.2	8.6	9.1	9.7	9.1	10.5	11.1	11.7	12.4	11.5	13.3	14.0	14.8	15.7
0	-20	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.5	7.1	8.2	8.6	9.1	9.7	9.1	10.5	11.1	11.7	12.4	11.6	13.3	14.0	14.8	15.6
0	-15	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.7	8.1	8.5	7.1	8.2	8.6	9.1	9.7	9.2	10.5	11.1	11.7	12.4	11.6	13.3	14.0	14.8	15.6
	-10	5.8	6.6	7.0	7.3	7.7	6.4	7.3	7.7	8.1	8.6	7.2	8.2	8.7	9.1	9.7	9.2	10.6	11.1	11.7	12.4	11.6	13.4	14.1	14.8	15.6
	-5	5.8	6.6	7.0	7.3	7.8	6.4	7.3	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.2	10.6	11.1	11.7	12.4	11.7	13.4	14.1	14.8	15.7
	0	5.7	6.6	6.9	7.3	7.7	6.3	7.3	7.6	8.0	8.5	7.1	8.2	8.6	9.1	9.6	9.2	10.5	11.0	11.6	12.3	11.6	13.3	14.0	14.7	15.5
	5	5.4	6.2	6.5	6.8	7.2	6.0	6.8	7.2	7.6	8.0	6.7	7.7	8.1	8.6	9.0	8.7	10.0	10.5	11.0	11.7	11.1	12.7	13.4	14.1	14.9
	10	4.8	5.6	5.8	6.2	6.5	5.4	6.2	6.5	6.9	7.2	6.2	7.1	7.4	7.8	8.3	8.0	9.2	9.7	10.2	10.8	10.4	11.9	12.5	13.2	13.9
	15	4.4	5.0	5.3	5.5	5.8	4.9	5.6	5.9	6.2	6.6	5.6	6.5	6.8	7.2	7.6	7.3	8.4	8.9	9.4	9.9	9.6	11.1	11.6	12.3	13.0
	20	3.9	4.5	4.7	4.9	5.2	4.4	5.1	5.3	5.6	5.9	5.1	5.9	6.2	6.5	6.9	6.8	7.8	8.2	8.6	9.1	8.9	10.3	10.8	11.4	12.1
	25	3.4	3.9	4.1	4.4	4.6	3.9	4.5	4.7	5.0	5.3	4.6	5.3	5.6	5.9	6.2	6.2	7.1	7.5	7.9	8.4	8.2	9.5	10.0	10.6	11.2
	30	2.7	3.2	3.3	3.5	3.7	3.2	3.7	3.9	4.1	4.4	3.9	4.5	4.7	5.0	5.3	5.4	6.2	6.6	6.9	7.3	7.3	8.4	8.9	9.4	9.9
	35	1.9	2.3	2.4	2.5	2.7	2.4	2.8	2.9	3.1	3.3	3.0	3.5	3.7	3.9	4.1	4.4	5.1	5.4	5.7	6.0	6.2	7.2	7.6	8.0	8.5
	40	1.1	1.4	1.4	1.5	1.7	1.6	1.8	2.0	2.1	2.2	2.1	2.5	2.6	2.8	3.0	3.5	4.0	4.3	4.5	4.8	5.1	6.0	6.3	6.6	7.0
	45	0.4	0.5	0.6	0.7	0.7	0.8	1.0	1.1	1.2	1.2	1.3	1.6	1.7	1.8	2.0	2.6	3.0	3.2	3.4	3.6	4.2	4.8	5.1	5.4	5.7
	46	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.8	0.9	1.0	1.1	1.4	1.5	1.6	1.7	2.4	2.8	2.9	3.1	3.3	3.9	4.5	4.8	5.1	5.4
5	-35	5.7	6.6	7.0	7.4	7.8	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.7	9.2	9.7	9.2	10.6	11.1	11.8	12.5	11.6	13.4	14.1	14.9	15.7
0	-30	5.7	6.6	7.0	7.3	7.8	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.7	9.2	9.7	9.2	10.6	11.1	11.7	12.4	11.6	13.4	14.1	14.8	15.7
0	-25	5.8	6.6	7.0	7.3	7.8	6.3	7.3	7.7	8.1	8.6	7.1	8.2	8.7	9.2	9.7	9.2	10.6	11.1	11.7	12.4	11.6	13.4	14.1	14.8	15.7
0	-20	5.8	6.6	7.0	7.3	7.8	6.4	7.3	7.7	8.1	8.6	7.2	8.2	8.7	9.2	9.7	9.2	10.6	11.1	11.7	12.4	11.7	13.4	14.1	14.8	15.7
	-15	5.8	6.6	7.0	7.4	7.8	6.4	7.3	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.2	10.6	11.1	11.7	12.4	11.7	13.4	14.1	14.8	15.7
	-10	5.7	6.5	6.8	7.2	7.6	6.3	7.2	7.5	7.9	8.4	7.0	8.1	8.5	9.0	9.5	9.1	10.4	10.9	11.5	12.2	11.5	13.2	13.9	14.6	15.4
	-5	5.5	6.3	6.7	7.0	7.4	6.1	7.0	7.4	7.8	8.2	6.9	7.9	8.3	8.8	9.3	8.9	10.2	10.7	11.3	11.9	11.3	13.0	13.6	14.3	15.1
	0	5.3	6.0	6.3	6.7	7.0	5.9	6.7	7.0	7.4	7.8	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.9	11.5	11.0	12.5	13.2	13.9	14.6
	5	4.8	5.5	5.8	6.1	6.4	5.4	6.1	6.4	6.8	7.2	6.1	7.0	7.4	7.8	8.2	7.9	9.1	9.6	10.1	10.6	10.3	11.8	12.4	13.0	13.8
	10	4.3	4.9	5.2	5.4	5.7	4.8	5.5	5.8	6.1	6.5	5.6	6.4	6.7	7.1	7.5	7.3	8.3	8.8	9.3	9.8	9.5	11.0	11.5	12.1	12.8
	15	3.8	4.4	4.6	4.8	5.1	4.3	5.0	5.2	5.5	5.8	5.0	5.8	6.1	6.4	6.8	6.7	7.7	8.1	8.5	9.0	8.8	10.2	10.7	11.3	11.9
	20	3.4	3.9	4.1	4.3	4.6	3.9	4.5	4.7	5.0	5.3	4.6	5.3	5.6	5.9	6.2	6.2	7.1	7.5	7.9	8.3	8.2	9.5	10.0	10.5	11.1
	25	3.0	3.5	3.6	3.8	4.1	3.5	4.0	4.2	4.5	4.7	4.2	4.8	5.0	5.3	5.6	5.7	6.6	6.9	7.3	7.7	7.6	8.8	9.3	9.8	10.3
	30	2.2	2.6	2.7	2.9	3.0	2.7	3.1	3.3	3.5	3.7	3.3	3.8	4.0	4.3	4.5	4.8	5.5	5.8	6.1	6.5	6.6	7.6	8.0	8.4	8.9
	35	1.4	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.4	2.6	2.4	2.9	3.0	3.2	3.4	3.8	4.4	4.7	4.9	5.2	5.5	6.4	6.7	7.1	7.5
	40	0.7	0.8	0.9	1.0	1.0	1.1	1.3	1.4	1.5	1.6	1.6	1.9	2.0	2.2	2.3	2.9	3.4	3.6	3.8	4.0	4.5	5.2	5.5	5.8	6.2
	44	0.0	0.1	0.2	0.2	0.3	0.4	0.6	0.6	0.7	0.8	1.0	1.2	1.3	1.4	1.5	2.2	2.6	2.7	2.9	3.1	3.7	4.3	4.5	4.8	5.1
6	-35	5.8	6.7	7.0	7.4	7.8	6.4	7.4	7.7	8.2	8.6	7.2	8.3	8.7	9.2	9.7	9.2	10.6	11.2	11.8	12.5	11.7	13.4	14.1	14.9	15.7
0	-30	5.8	6.7	7.0	7.4	7.8	6.4	7.4	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.2	10.6	11.2	11.8	12.4	11.7	13.4	14.1	14.9	15.7
0	-25	5.8	6.7	7.0	7.4	7.8	6.4	7.4	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.3	10.6	11.2	11.8	12.4	11.7	13.4	14.1	14.9	15.7
0	-20	5.8	6.7	7.0	7.4	7.8	6.4	7.4	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.3	10.6	11.2	11.8	12.4	11.7	13.4	14.1	14.9	15.7
	-15	5.8	6.6	6.9	7.3	7.7	6.4	7.3	7.7	8.1	8.5	7.2	8.2	8.6	9.1	9.6	9.2	10.5	11.1	11.7	12.3	11.7	13.3	14.0	14.7	15.5
	-10	5.6	6.4	6.7	7.1	7.5	6.2	7.1	7.4	7.8	8.3	7.0	8.0	8.4	8.9	9.3	9.0	10.3	10.8	11.4	12.0	11.4	13.1	13.7	14.4	15.2
	-5	5.3	6.1	6.4	6.7	7.0	5.9	6.7	7.1	7.4	7.8	6.7	7.6	8.0	8.4	8.9	8.6	9.8	10.3	10.9	11.5	11.0	12.6	13.2	13.9	14.6
	0	4.7	5.4	5.7	6.0	6.3	5.3	6.1	6.4	6.7	7.1	6.1	6.9	7.3	7.7	8.1	7.8	9.0	9.5	10.0	10.5	10.2	11.7	12.3	12.9	13.6
	5	4.2	4.9	5.1	5.4	5.6	4.8	5.5	5.7	6.0	6.4	5.5	6.3	6.6	7.0	7.4	7.2	8.3	8.7	9.1	9.7	9.5	10.9	11.4	12.0	12.7
	10	3.7	4.3	4.5	4.8	5.0	4.3	4.9	5.1	5.4	5.7	5.0	5.7	6.0	6.3	6.7	6.6	7.6	8.0	8.4	8.9	8.8	10.1	10.6	11.1	11.8
	15	3.3	3.8	4.0	4.2	4.4	3.8	4.4	4.6	4.8	5.1	4.5	5.2	5.4	5.7	6.0	6.1	7.0	7.3	7.7	8.2	8.1	9.3	9.8	10.3	10.9
	20	2.9	3.3	3.5	3.7	3.9	3.4	3.9	4.1	4.3	4.6	4.1	4.7	4.9	5.2	5.4	5.6	6.4	6.8	7.1	7.5	7.5	8.6	9.1	9.6	10.1
	25	2.4	2.7	2.9	3.0	3.2	2.8	3.3	3.4	3.6	3.8	3.5	4.0	4.2	4.4	4.7	5.0	5.7	6.0	6.3	6.7	6.8	7.8	8.2	8.7	9.2
	30	1.6	1.9	2.0	2.2	2.3	2.1	2.4	2.6	2.7	2.9	2.7	3.1	3.3	3.5	3.7	4.1	4.7	5.0	5.2	5.5	5.8	6.7	7.0	7.4	7.9
	35	0.9	1.1	1.2	1.3	1.4	1.3	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.5	2.6	3.2	3.7	3.9	4.1	4.4	4.8	5.6	5.9	6.2	6.6
	40	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.8	0.9	1.0	1.1	1.4	1.5	1.6	1.7	2.4	2.8	2.9	3.1	3.3	3.9	4.5	4.8	5.0	5.3
	42	-0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.5	0.6	0.8	1.0	1.1	1.1	1.2	2.0	2.3	2.5	2.6	2.8	3.5	4.0	4.3	4.5	4.8
7	-35	5.8	6.7	7.1	7.4	7.8	6.4	7.4	7.8	8.2	8.6	7.2	8.3	8.8	9.2	9.8	9.3	10.7	11.2	11.8	12.5	11.7	13.5	14.2	14.9	15.7
0	-30	5.8	6.7	7.0	7.4	7.8	6.4	7.4	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.3	10.6	11.2	11.8	12.4	11.7	13.4	14.1	14.8	15.7
0	-25	5.8	6.6	6.9	7.3	7.7	6.4	7.3	7.7	8.1	8.5	7.2	8.2	8.6	9.1	9.6	9.2	10.5	11.1	11.6	12.3	11.7	13.3	14.0	14.7	15.5
0	-20	5.7	6.5	6.9	7.2	7.6	6.3	7.2	7.6	8.0	8.4	7.1	8.1	8.6	9.0	9.5	9.1	10.5	11.0	11.5	12.2	11.6	13.2	13.9	14.6	15.4
	-15	5.5	6.3	6.6	6.9	7.3	6.1	6.9	7.3	7.7	8.1	6.9	7.9	8.2	8.7	9.1	8.8	10.1	10.6	11.2	11.8	11.3	12.9	13.5	14.2	15.0
	-10	5.2	6.0	6.2	6.6	6.9	5.8	6.6	6.9	7.3	7.7	6.6	7.5	7.9	8.3	8.7	8.4	9.7	10.2	10.7	11.3	10.9	12.4	13.0	13.7	14.4
	-5	4.7	5.4	5.7	5.9	6.3	5.3	6.0	6.3	6.6	7.0	6.0	6.9	7.2	7.6	8.0	7.8	8.9	9.4	9.9	10.4	10.1	11.6	12.2	12.8	13.5
	0	4.2	4.8	5.0	5.3	5.6	4.7	5.4	5.7	6.0	6.3	5.4	6.2	6.6	6.9	7.3	7.1	8.2	8.6	9.1	9.6	9.4	10.8	11.3	11.9	12.6
	5	3.7	4.2	4.4	4.7	4.9	4.2	4.8	5.1	5.3	5.6	4.9	5.6	5.9	6.2	6.6	6.5	7.5	7.9	8.3	8.8	8.7	9.9	10.5	11.0	11.6
	10	3.2	3.7	3.9	4.1	4.3	3.7	4.3	4.5	4.7	5.0	4.4	5.1	5.3	5.6	5.9	6.0	6.9	7.2	7.6	8.0	8.0	9.2	9.6	10.2	10.7
	15	2.8	3.2	3.4	3.6	3.8	3.3	3.8	4.0	4.2	4.4	3.9	4.5	4.8	5.0	5.3	5.5	6.3	6.6	7.0	7.3	7.3	8.5	8.9	9.4	9.9
	20	2.4	2.8	2.9	3.1	3.2	2.9	3.3	3.5	3.7	3.9	3.5	4.0	4.2	4.5	4.7	5.0	5.7	6.0	6.3	6.7	6.8	7.8	8.2	8.7	9.2
	25	1.8	2.1	2.2	2.3	2.5	2.2	2.6	2.7	2.9	3.0	2.8	3.3	3.5	3.6	3.8	4.3	4.9	5.1	5.4	5.7	6.0	6.9	7.3	7.6	8.1
	30	1.1	1.3	1.4	1.5	1.6	1.5	1.8	1.9	2.0	2.2	2.1	2.5	2.6	2.7	2.9	3.5	4.0	4.2	4.4	4.7	5.1	5.9	6.2	6.5	6.9
	35	0.4	0.6	0.6	0.7	0.8	0.8	1.0	1.1	1.2	1.3	1.4	1.7	1.8	1.9	2.0	2.7	3.1	3.3	3.4	3.6	4.2	4.9	5.1	5.4	5.7
	40	-0.2	-0.2	-0.2	-0.1	-0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.8	0.9	1.0	1.0	1.8	2.2	2.3	2.4	2.6	3.3	3.8	4.0	4.3	4.5

525AFM-06-01

Figure 4-40 (Sheet 4)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
8	-35	4.5	5.2	5.4	5.7	6.0	4.8	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	5.3	6.0	6.3	6.7	7.0	5.6	6.4	6.7	7.0	7.4
0	-30	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.6	5.3	6.0	6.3	6.6	7.0	5.5	6.3	6.6	7.0	7.3
0	-25	4.5	5.1	5.3	5.6	5.9	4.7	5.4	5.6	5.9	6.2	5.0	5.7	5.9	6.2	6.6	5.2	6.0	6.2	6.6	6.9	5.5	6.3	6.6	6.9	7.3
0	-20	4.4	5.0	5.2	5.5	5.8	4.6	5.2	5.5	5.8	6.1	4.8	5.5	5.8	6.1	6.4	5.1	5.8	6.1	6.4	6.8	5.4	6.1	6.4	6.8	7.1
	-15	3.9	4.5	4.7	4.9	5.2	4.1	4.7	5.0	5.2	5.5	4.4	5.0	5.3	5.5	5.8	4.6	5.3	5.6	5.8	6.1	4.9	5.6	5.9	6.2	6.5
	-10	3.5	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.6	4.9	3.9	4.5	4.7	4.9	5.2	4.2	4.8	5.0	5.2	5.5	4.4	5.1	5.3	5.6	5.9
	-5	3.0	3.4	3.6	3.8	4.0	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	3.6	4.2	4.4	4.6	4.8	3.9	4.4	4.7	4.9	5.2
	0	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5
	5	2.1	2.4	2.5	2.7	2.8	2.3	2.6	2.7	2.9	3.0	2.5	2.8	3.0	3.2	3.3	2.7	3.1	3.3	3.4	3.6	2.9	3.4	3.5	3.7	3.9
	10	1.6	1.9	2.0	2.2	2.3	1.8	2.1	2.2	2.4	2.5	2.0	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.9	3.1	2.5	2.9	3.0	3.2	3.3
	15	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.2	2.3	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.7	2.8
	20	0.9	1.1	1.1	1.2	1.3	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.6	1.6	1.8	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.3
	25	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.7	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.2	1.3	1.0	1.3	1.3	1.4	1.5
	30	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.6	0.6	0.7	0.8
	35	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	0.0
	37	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.2	-0.9	-0.9	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.5
9	-35	4.3	5.0	5.2	5.5	5.7	4.6	5.2	5.5	5.7	6.0	4.8	5.5	5.8	6.1	6.4	5.1	5.8	6.1	6.4	6.7	5.4	6.1	6.4	6.8	7.1
0	-30	4.2	4.8	5.0	5.3	5.6	4.4	5.0	5.3	5.6	5.8	4.7	5.3	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.5	5.2	6.0	6.3	6.6	6.9
0	-25	4.1	4.6	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.8	5.5	5.7	6.0	6.3	5.1	5.8	6.1	6.4	6.7
0	-20	3.8	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.0	5.3	4.2	4.8	5.1	5.3	5.6	4.5	5.1	5.4	5.6	5.9	4.8	5.4	5.7	6.0	6.3
	-15	3.4	3.9	4.0	4.2	4.5	3.6	4.1	4.3	4.5	4.7	3.8	4.4	4.6	4.8	5.1	4.1	4.7	4.9	5.1	5.4	4.3	4.9	5.2	5.4	5.7
	-10	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	3.9	4.2	3.4	3.8	4.0	4.2	4.5	3.6	4.1	4.3	4.5	4.8	3.9	4.4	4.6	4.9	5.1
	-5	2.4	2.8	3.0	3.1	3.3	2.6	3.0	3.2	3.4	3.5	2.9	3.3	3.5	3.6	3.8	3.1	3.6	3.7	3.9	4.1	3.4	3.8	4.0	4.2	4.5
	0	2.0	2.3	2.4	2.6	2.7	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.2	3.4	3.5	2.9	3.3	3.5	3.6	3.8
	5	1.6	1.8	1.9	2.1	2.2	1.8	2.0	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.7	2.2	2.5	2.7	2.8	3.0	2.4	2.8	2.9	3.1	3.3
	10	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.6	2.7
	15	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2
	20	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.2	1.3	1.3	1.1	1.3	1.4	1.5	1.6
	25	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9
	30	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2
	35	-1.3	-1.3	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6
1	-35	4.1	4.6	4.9	5.1	5.4	4.3	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.8	5.5	5.7	6.0	6.3	5.1	5.8	6.1	6.4	6.7
0	-30	3.9	4.4	4.6	4.8	5.1	4.1	4.6	4.9	5.1	5.4	4.3	4.9	5.2	5.4	5.7	4.6	5.2	5.5	5.8	6.1	4.9	5.5	5.8	6.1	6.4
0	-25	3.7	4.2	4.4	4.6	4.8	3.9	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.2	5.4	4.4	5.0	5.2	5.5	5.8	4.6	5.3	5.5	5.8	6.1
0	-20	3.2	3.7	3.9	4.1	4.3	3.4	3.9	4.1	4.3	4.6	3.7	4.2	4.4	4.6	4.9	3.9	4.5	4.7	5.0	5.2	4.2	4.8	5.0	5.3	5.5
0	-15	2.8	3.2	3.4	3.6	3.8	3.0	3.5	3.6	3.8	4.0	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.8	4.3	4.5	4.7	5.0
	-10	2.4	2.8	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.1	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4
	-5	1.9	2.2	2.4	2.5	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.1	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.6	3.7
	0	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2
	5	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.5	2.6
	10	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.8	1.9	2.0	2.1
	15	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.5	1.6
	20	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	1.0
	25	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
	30	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3
	33	-1.5	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.5	-1.6	-1.2	-1.3	-1.3	-1.3	-1.4	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9
1	-35	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.8	5.0	4.0	4.6	4.8	5.1	5.3	4.3	4.9	5.1	5.4	5.7	4.6	5.2	5.4	5.7	6.0
1	-30	3.4	3.9	4.1	4.3	4.5	3.6	4.1	4.3	4.5	4.7	3.8	4.4	4.6	4.8	5.1	4.1	4.7	4.9	5.1	5.4	4.4	5.0	5.2	5.5	5.7
0	-25	3.1	3.6	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.6	4.8	5.0	4.1	4.6	4.9	5.1	5.4
0	-20	2.7	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.8	3.1	3.6	3.8	3.9	4.2	3.4	3.9	4.0	4.2	4.5	3.6	4.1	4.3	4.6	4.8
0	-15	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.3	2.7	3.1	3.3	3.4	3.6	2.9	3.4	3.5	3.7	3.9	3.2	3.7	3.8	4.0	4.2
	-10	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.8	3.2	3.3	3.5	3.7
	-5	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5	2.0	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1
	0	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.7	1.8	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5
	5	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0
	10	0.3	0.4	0.4	0.5	0.5	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	1.0	0.8	1.0	1.1	1.2	1.2	1.0	1.2	1.3	1.4	1.5
	15	-0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	1.0
	20	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4
	25	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2
	30	-1.5	-1.6	-1.6	-1.7	-1.7	-1.4	-1.4	-1.5	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9
	31	-1.7	-1.8	-1.8	-1.9	-1.9	-1.6	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.5	-1.6	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1

525AFM-06-01

Figure 4-40 (Sheet 5)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
8	-35	5.8	6.7	7.0	7.4	7.8	6.4	7.4	7.7	8.1	8.6	7.2	8.3	8.7	9.2	9.7	9.3	10.6	11.2	11.8	12.4	11.8	13.4	14.1	14.9	15.7
0	-30	5.8	6.6	7.0	7.3	7.7	6.4	7.3	7.7	8.1	8.5	7.2	8.3	8.7	9.1	9.6	9.2	10.6	11.1	11.7	12.3	11.7	13.4	14.0	14.8	15.6
0	-25	5.8	6.6	6.9	7.3	7.7	6.4	7.3	7.6	8.0	8.5	7.2	8.2	8.6	9.1	9.5	9.2	10.5	11.0	11.6	12.2	11.7	13.3	14.0	14.7	15.5
0	-20	5.7	6.5	6.8	7.1	7.5	6.2	7.1	7.5	7.9	8.3	7.0	8.1	8.4	8.9	9.4	9.1	10.3	10.8	11.4	12.0	11.5	13.1	13.8	14.5	15.2
	-15	5.2	5.9	6.2	6.5	6.9	5.7	6.6	6.9	7.2	7.6	6.5	7.5	7.8	8.2	8.7	8.4	9.6	10.1	10.6	11.2	10.8	12.3	12.9	13.6	14.3
	-10	4.7	5.4	5.6	5.9	6.2	5.2	6.0	6.3	6.6	6.9	6.0	6.8	7.2	7.5	8.0	7.7	8.9	9.3	9.8	10.3	10.1	11.5	12.1	12.7	13.4
	-5	4.1	4.7	5.0	5.2	5.5	4.7	5.3	5.6	5.9	6.2	5.4	6.2	6.5	6.8	7.2	7.1	8.1	8.5	9.0	9.5	9.3	10.7	11.2	11.8	12.4
	0	3.6	4.2	4.4	4.6	4.8	4.1	4.7	5.0	5.2	5.5	4.8	5.6	5.8	6.1	6.5	6.5	7.4	7.8	8.2	8.6	8.6	9.8	10.3	10.9	11.5
	5	3.2	3.6	3.8	4.0	4.2	3.7	4.2	4.4	4.6	4.9	4.3	5.0	5.2	5.5	5.8	5.9	6.8	7.1	7.5	7.9	7.9	9.0	9.5	10.0	10.6
	10	2.7	3.1	3.3	3.5	3.6	3.2	3.7	3.9	4.1	4.3	3.9	4.4	4.6	4.9	5.2	5.4	6.2	6.5	6.8	7.2	7.2	8.3	8.7	9.2	9.7
	15	2.3	2.7	2.8	2.9	3.1	2.8	3.2	3.4	3.5	3.7	3.4	3.9	4.1	4.3	4.6	4.9	5.6	5.9	6.2	6.5	6.7	7.7	8.1	8.5	9.0
	20	1.9	2.2	2.3	2.4	2.5	2.3	2.7	2.8	3.0	3.1	2.9	3.4	3.5	3.7	3.9	4.3	5.0	5.2	5.5	5.8	6.1	7.0	7.3	7.7	8.2
	25	1.2	1.5	1.6	1.7	1.8	1.7	2.0	2.1	2.2	2.3	2.3	2.6	2.8	2.9	3.1	3.6	4.2	4.4	4.6	4.9	5.3	6.1	6.4	6.7	7.1
	30	0.6	0.8	0.9	0.9	1.0	1.0	1.3	1.3	1.4	1.5	1.6	1.9	2.0	2.1	2.2	2.9	3.3	3.5	3.7	3.9	4.5	5.1	5.4	5.7	6.0
	35	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.6	0.6	0.7	0.9	1.1	1.2	1.3	1.4	2.1	2.5	2.6	2.8	2.9	3.6	4.2	4.4	4.6	4.9
	37	-0.4	-0.4	-0.4	-0.3	-0.3	0.0	0.0	0.1	0.1	0.2	0.5	0.6	0.7	0.7	0.8	1.6	1.9	2.0	2.2	2.3	3.1	3.6	3.8	4.0	4.2
9	-35	5.6	6.5	6.8	7.1	7.5	6.2	7.1	7.5	7.9	8.3	7.0	8.1	8.5	8.9	9.4	9.0	10.3	10.9	11.4	12.0	11.5	13.1	13.8	14.5	15.3
0	-30	5.5	6.3	6.6	6.9	7.3	6.1	7.0	7.3	7.7	8.1	6.9	7.9	8.3	8.7	9.1	8.8	10.1	10.6	11.2	11.8	11.3	12.9	13.5	14.2	15.0
0	-25	5.4	6.1	6.4	6.7	7.1	5.9	6.8	7.1	7.5	7.9	6.7	7.7	8.0	8.5	8.9	8.7	9.9	10.4	10.9	11.5	11.1	12.6	13.2	13.9	14.7
0	-20	5.0	5.7	6.0	6.3	6.7	5.6	6.4	6.7	7.0	7.4	6.4	7.3	7.6	8.0	8.4	8.2	9.4	9.9	10.4	10.9	10.6	12.1	12.7	13.4	14.1
	-15	4.6	5.2	5.5	5.8	6.1	5.1	5.9	6.2	6.5	6.8	5.9	6.7	7.1	7.4	7.8	7.6	8.7	9.2	9.6	10.2	10.0	11.4	11.9	12.6	13.2
	-10	4.1	4.7	4.9	5.2	5.4	4.6	5.3	5.6	5.8	6.2	5.4	6.1	6.4	6.8	7.1	7.0	8.0	8.4	8.9	9.4	9.3	10.6	11.1	11.7	12.3
	-5	3.6	4.1	4.3	4.5	4.8	4.1	4.7	4.9	5.2	5.5	4.8	5.5	5.8	6.1	6.4	6.4	7.4	7.7	8.1	8.6	8.5	9.8	10.2	10.8	11.4
	0	3.1	3.6	3.7	3.9	4.2	3.6	4.1	4.3	4.6	4.8	4.3	4.9	5.1	5.4	5.7	5.8	6.7	7.0	7.4	7.8	7.8	8.9	9.4	9.9	10.4
	5	2.6	3.0	3.2	3.4	3.6	3.1	3.6	3.8	4.0	4.2	3.8	4.3	4.6	4.8	5.0	5.3	6.1	6.4	6.7	7.1	7.1	8.2	8.6	9.1	9.6
	10	2.2	2.6	2.7	2.8	3.0	2.7	3.1	3.2	3.4	3.6	3.3	3.8	4.0	4.2	4.4	4.8	5.5	5.8	6.1	6.4	6.6	7.5	7.9	8.4	8.8
	15	1.8	2.1	2.2	2.3	2.5	2.3	2.6	2.7	2.9	3.1	2.9	3.3	3.5	3.7	3.9	4.3	4.9	5.2	5.4	5.7	6.0	6.9	7.3	7.7	8.1
	20	1.3	1.6	1.6	1.7	1.9	1.7	2.0	2.2	2.3	2.4	2.3	2.7	2.8	3.0	3.2	3.7	4.3	4.5	4.7	5.0	5.4	6.2	6.5	6.8	7.2
	25	0.8	0.9	1.0	1.1	1.2	1.2	1.4	1.5	1.6	1.7	1.7	2.0	2.1	2.3	2.4	3.0	3.5	3.7	3.9	4.1	4.6	5.3	5.6	5.9	6.2
	30	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.8	0.9	1.0	1.1	1.4	1.4	1.5	1.6	2.4	2.7	2.9	3.1	3.2	3.9	4.5	4.7	5.0	5.3
	35	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	0.0	0.0	0.1	0.1	0.4	0.6	0.6	0.7	0.7	1.6	1.9	2.0	2.1	2.2	3.0	3.5	3.7	3.9	4.1
1	-35	5.4	6.1	6.4	6.7	7.1	6.0	6.8	7.1	7.5	7.9	6.7	7.7	8.1	8.5	8.9	8.7	9.9	10.4	10.9	11.5	11.1	12.7	13.3	14.0	14.7
0	-30	5.1	5.9	6.1	6.4	6.8	5.7	6.5	6.8	7.2	7.6	6.5	7.4	7.8	8.2	8.6	8.4	9.6	10.1	10.6	11.1	10.8	12.3	12.9	13.6	14.3
0	-25	4.9	5.6	5.9	6.2	6.5	5.5	6.3	6.6	6.9	7.3	6.3	7.1	7.5	7.9	8.3	8.1	9.2	9.7	10.2	10.7	10.5	11.9	12.5	13.2	13.8
0	-20	4.5	5.1	5.3	5.6	5.9	5.0	5.7	6.0	6.3	6.6	5.8	6.6	6.9	7.3	7.6	7.5	8.6	9.0	9.4	10.0	9.8	11.2	11.7	12.3	13.0
0	-15	4.0	4.6	4.8	5.0	5.3	4.6	5.2	5.5	5.7	6.0	5.3	6.0	6.3	6.6	7.0	6.9	7.9	8.3	8.7	9.2	9.1	10.4	11.0	11.5	12.1
	-10	3.5	4.1	4.3	4.5	4.7	4.1	4.7	4.9	5.1	5.4	4.8	5.5	5.7	6.0	6.3	6.4	7.3	7.6	8.0	8.5	8.4	9.7	10.2	10.7	11.3
	-5	3.0	3.5	3.7	3.9	4.1	3.6	4.1	4.3	4.5	4.7	4.2	4.8	5.1	5.3	5.6	5.8	6.6	6.9	7.3	7.7	7.7	8.8	9.3	9.8	10.3
	0	2.6	3.0	3.1	3.3	3.5	3.1	3.5	3.7	3.9	4.1	3.7	4.3	4.5	4.7	5.0	5.2	6.0	6.3	6.6	7.0	7.1	8.1	8.5	9.0	9.5
	5	2.1	2.5	2.6	2.7	2.9	2.6	3.0	3.2	3.3	3.5	3.2	3.7	3.9	4.1	4.3	4.7	5.4	5.6	5.9	6.3	6.5	7.4	7.8	8.2	8.7
	10	1.7	2.0	2.1	2.2	2.4	2.2	2.5	2.7	2.8	3.0	2.8	3.2	3.4	3.6	3.8	4.2	4.8	5.1	5.3	5.6	5.9	6.8	7.1	7.5	7.9
	15	1.3	1.6	1.7	1.8	1.9	1.8	2.1	2.2	2.3	2.4	2.4	2.7	2.9	3.0	3.2	3.7	4.3	4.5	4.7	5.0	5.4	6.2	6.5	6.8	7.2
	20	0.8	1.0	1.1	1.2	1.2	1.2	1.5	1.6	1.7	1.8	1.8	2.1	2.2	2.4	2.5	3.1	3.6	3.8	4.0	4.2	4.7	5.4	5.7	6.0	6.3
	25	0.3	0.4	0.5	0.5	0.6	0.7	0.9	1.0	1.0	1.1	1.3	1.5	1.6	1.7	1.8	2.5	2.9	3.1	3.2	3.4	4.0	4.7	4.9	5.2	5.5
	30	-0.2	-0.2	-0.1	-0.1	-0.1	0.2	0.3	0.3	0.3	0.4	0.7	0.8	0.9	1.0	1.0	1.8	2.2	2.3	2.4	2.6	3.3	3.8	4.0	4.2	4.5
	33	-0.7	-0.7	-0.7	-0.7	-0.7	-0.4	-0.3	-0.3	-0.3	-0.3	0.1	0.2	0.3	0.3	0.4	1.3	1.5	1.6	1.7	1.8	2.6	3.1	3.2	3.4	3.6
1	-35	4.8	5.5	5.8	6.1	6.4	5.4	6.2	6.5	6.8	7.1	6.2	7.1	7.4	7.8	8.2	8.0	9.1	9.6	10.1	10.6	10.4	11.8	12.4	13.0	13.7
1	-30	4.6	5.3	5.5	5.8	6.1	5.2	5.9	6.2	6.5	6.9	6.0	6.8	7.1	7.5	7.9	7.7	8.8	9.3	9.7	10.3	10.1	11.5	12.1	12.7	13.3
0	-25	4.3	4.9	5.2	5.4	5.7	4.9	5.6	5.8	6.1	6.4	5.6	6.4	6.7	7.1	7.5	7.3	8.4	8.8	9.3	9.7	9.6	11.0	11.5	12.1	12.8
0	-20	3.9	4.4	4.6	4.9	5.1	4.4	5.0	5.3	5.6	5.8	5.2	5.9	6.2	6.5	6.8	6.8	7.8	8.2	8.6	9.0	9.0	10.3	10.8	11.3	11.9
0	-15	3.4	3.9	4.1	4.3	4.6	4.0	4.5	4.8	5.0	5.3	4.7	5.3	5.6	5.9	6.2	6.3	7.2	7.5	7.9	8.3	8.3	9.5	10.0	10.5	11.1
	-10	3.0	3.4	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.7	4.2	4.8	5.0	5.3	5.6	5.7	6.6	6.9	7.2	7.6	7.6	8.8	9.2	9.7	10.2
	-5	2.5	2.9	3.0	3.2	3.4	3.0	3.5	3.6	3.8	4.0	3.7	4.2	4.4	4.6	4.9	5.2	5.9	6.2	6.5	6.9	7.0	8.0	8.4	8.9	9.3
	0	2.1	2.4	2.5	2.6	2.8	2.5	2.9	3.1	3.2	3.4	3.2	3.6	3.8	4.0	4.2	4.6	5.3	5.6	5.8	6.2	6.4	7.3	7.7	8.1	8.5
	5	1.6	1.9	2.0	2.1	2.3	2.1	2.4	2.6	2.7	2.9	2.7	3.1	3.3	3.5	3.7	4.1	4.7	5.0	5.2	5.5	5.8	6.7	7.0	7.4	7.8
	10	1.2	1.5	1.6	1.7	1.8	1.7	2.0	2.1	2.2	2.3	2.3	2.6	2.8	2.9	3.1	3.6	4.2	4.4	4.6	4.9	5.3	6.1	6.4	6.7	7.1
	15	0.8	1.0	1.1	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.8	2.1	2.2	2.4	2.5	3.1	3.6	3.8	4.0	4.2	4.7	5.4	5.7	6.0	6.3
	20	0.4	0.5	0.5	0.6	0.6	0.8	1.0	1.0	1.1	1.2	1.3	1.6	1.7	1.8	1.9	2.6	3.0	3.1	3.3	3.5	4.1	4.7	5.0	5.2	5.5
	25	-0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.5	0.6	0.8	1.0	1.1	1.2	1.2	2.0	2.3	2.5	2.6	2.8	3.5	4.0	4.2	4.5	4.7
	30	-0.7	-0.7	-0.7	-0.7	-0.7	-0.3	-0.3	-0.3	-0.2	-0.2	0.2	0.3	0.3	0.4	0.4	1.3	1.5	1.6	1.7	1.9	2.7	3.1	3.3	3.5	3.7
	31	-0.9	-0.9	-0.9	-0.9	-0.9	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	0.0	0.1	0.1	0.1	1.1	1.3	1.4	1.5	1.6	2.4	2.8	3.0	3.1	3.3

525AFM-06-01

Figure 4-40 (Sheet 6)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	3.1	3.5	3.7	3.9	4.1	3.3	3.8	3.9	4.1	4.4	3.5	4.0	4.2	4.4	4.7	3.8	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.1	5.3
2	-30	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.7	3.9	4.1	3.4	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.8	3.9	4.4	4.6	4.8	5.1
0	-25	2.6	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6
0	-20	2.2	2.5	2.6	2.8	2.9	2.4	2.7	2.8	3.0	3.1	2.6	3.0	3.1	3.3	3.4	2.8	3.2	3.4	3.6	3.7	3.1	3.5	3.7	3.8	4.0
0	-15	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.7	2.2	2.5	2.6	2.8	2.9	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.2	3.3	3.5
	-10	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.5	2.7	2.2	2.6	2.7	2.8	3.0
	-5	1.0	1.2	1.2	1.3	1.4	1.1	1.4	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.1	1.8	2.1	2.2	2.3	2.4
	0	0.6	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9
	5	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.4
	10	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.9
	15	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4
	20	-0.9	-0.9	-0.9	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1
	25	-1.3	-1.4	-1.4	-1.4	-1.5	-1.2	-1.2	-1.3	-1.3	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7
	29	-1.9	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.9	-1.9	-2.0	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.6	-1.3	-1.3	-1.3	-1.3	-1.4
1	-35	2.2	2.5	2.6	2.8	2.9	2.4	2.7	2.9	3.0	3.2	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.7	3.1	3.5	3.7	3.9	4.1
4	-30	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.7	2.8	2.3	2.7	2.8	2.9	3.1	2.5	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7
0	-25	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.5	2.6	2.1	2.5	2.6	2.7	2.9	2.4	2.7	2.9	3.0	3.2
0	-20	1.2	1.4	1.5	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.8	2.0	2.1	2.3	2.4	2.0	2.3	2.4	2.5	2.7
0	-15	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2
	-10	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	0.9	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.5	1.6	1.7
	-5	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.9	0.8	1.0	1.0	1.1	1.2
	0	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7
	5	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2
	10	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2
	15	-1.3	-1.4	-1.4	-1.4	-1.4	-1.2	-1.2	-1.2	-1.2	-1.3	-1.0	-1.0	-1.0	-1.0	-1.1	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6
	20	-1.6	-1.7	-1.7	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.5	-1.2	-1.2	-1.2	-1.2	-1.3	-1.0	-1.0	-1.0	-1.0	-1.0
	25	-2.2	-2.3	-2.4	-2.4	-2.5	-2.1	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-1.9	-2.0	-1.6	-1.7	-1.7	-1.7	-1.8
1	-35	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.5	2.6	2.7
6	-30	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	2.0	2.1	2.2	2.3
0	-25	0.6	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.7	1.8
0	-20	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.1	1.1	1.0	1.2	1.2	1.3	1.4
0	-15	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.8	0.9	1.0
	-10	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
	-5	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0
	0	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4	-0.4
	5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.5	-1.2	-1.2	-1.2	-1.2	-1.3	-1.0	-1.0	-1.0	-1.0	-1.1	-0.8	-0.8	-0.8	-0.8	-0.8
	10	-1.8	-1.9	-1.9	-1.9	-2.0	-1.6	-1.7	-1.8	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.4	-1.2	-1.2	-1.2	-1.2	-1.2
	15	-2.1	-2.2	-2.2	-2.3	-2.3	-1.9	-2.1	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.6	-1.7	-1.8	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6
	20	-2.4	-2.6	-2.6	-2.7	-2.8	-2.3	-2.5	-2.5	-2.6	-2.6	-2.2	-2.3	-2.3	-2.4	-2.5	-2.0	-2.1	-2.2	-2.2	-2.3	-1.9	-2.0	-2.0	-2.0	-2.1
1	-35	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.1	1.1	1.0	1.2	1.2	1.3	1.4
8	-30	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1
0	-25	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6
0	-20	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2
0	-15	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2
	-10	-1.3	-1.3	-1.3	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6
	-5	-1.6	-1.7	-1.7	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0
	0	-1.9	-2.1	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.7	-1.7	-1.8	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.4
	5	-2.2	-2.4	-2.4	-2.5	-2.5	-2.1	-2.2	-2.3	-2.3	-2.4	-2.0	-2.1	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.6	-1.7	-1.8	-1.8	-1.8
	10	-2.5	-2.7	-2.7	-2.8	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7	-2.3	-2.4	-2.4	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4	-1.9	-2.1	-2.1	-2.1	-2.2
	15	-2.8	-3.0	-3.0	-3.1	-3.2	-2.7	-2.8	-2.9	-3.0	-3.1	-2.5	-2.7	-2.8	-2.8	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7	-2.2	-2.4	-2.4	-2.5	-2.5
	16	-2.9	-3.1	-3.1	-3.2	-3.3	-2.8	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.9	-2.9	-3.0	-2.5	-2.6	-2.7	-2.8	-2.8	-2.3	-2.5	-2.5	-2.6	-2.7

525AFM-06-01

Figure 4-40 (Sheet 7)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	4.3	4.9	5.1	5.4	5.7	4.9	5.5	5.8	6.1	6.4	5.6	6.4	6.7	7.0	7.4	7.3	8.4	8.8	9.2	9.7	9.6	11.0	11.5	12.1	12.8
2	-30	4.1	4.7	4.9	5.2	5.4	4.7	5.3	5.6	5.9	6.2	5.4	6.2	6.5	6.8	7.1	7.1	8.1	8.5	9.0	9.4	9.4	10.7	11.2	11.8	12.4
0	-25	3.7	4.3	4.5	4.7	4.9	4.3	4.9	5.1	5.4	5.6	5.0	5.7	6.0	6.3	6.6	6.7	7.6	8.0	8.4	8.8	8.8	10.1	10.5	11.1	11.7
0	-20	3.3	3.8	4.0	4.2	4.4	3.8	4.4	4.6	4.8	5.1	4.5	5.2	5.4	5.7	6.0	6.1	7.0	7.3	7.7	8.1	8.2	9.3	9.8	10.3	10.8
0	-15	2.9	3.3	3.5	3.6	3.8	3.4	3.9	4.1	4.3	4.5	4.1	4.7	4.9	5.1	5.4	5.6	6.4	6.7	7.1	7.5	7.5	8.6	9.0	9.5	10.0
	-10	2.4	2.8	3.0	3.1	3.3	2.9	3.4	3.5	3.7	3.9	3.6	4.1	4.3	4.6	4.8	5.1	5.8	6.1	6.4	6.8	6.9	7.9	8.3	8.8	9.2
	-5	2.0	2.3	2.4	2.6	2.7	2.5	2.8	3.0	3.1	3.3	3.1	3.6	3.8	3.9	4.2	4.6	5.2	5.5	5.8	6.1	6.3	7.2	7.6	8.0	8.4
	0	1.6	1.8	1.9	2.0	2.2	2.0	2.3	2.5	2.6	2.7	2.6	3.0	3.2	3.4	3.5	4.0	4.6	4.9	5.1	5.4	5.7	6.6	6.9	7.3	7.7
	5	1.2	1.4	1.5	1.5	1.6	1.6	1.9	2.0	2.1	2.2	2.2	2.5	2.7	2.8	3.0	3.6	4.1	4.3	4.5	4.7	5.2	6.0	6.3	6.6	7.0
	10	0.8	0.9	1.0	1.1	1.1	1.2	1.4	1.5	1.6	1.7	1.8	2.1	2.2	2.3	2.4	3.1	3.5	3.7	3.9	4.1	4.7	5.4	5.6	5.9	6.3
	15	0.4	0.5	0.5	0.6	0.6	0.8	0.9	1.0	1.1	1.2	1.3	1.6	1.7	1.8	1.9	2.6	3.0	3.1	3.3	3.5	4.1	4.7	5.0	5.2	5.5
	20	-0.1	0.0	0.0	0.1	0.1	0.3	0.5	0.5	0.6	0.6	0.9	1.1	1.1	1.2	1.3	2.1	2.4	2.5	2.7	2.8	3.6	4.1	4.3	4.5	4.8
	25	-0.5	-0.5	-0.5	-0.4	-0.4	-0.1	0.0	0.0	0.0	0.0	0.4	0.5	0.6	0.6	0.7	1.6	1.8	1.9	2.0	2.2	3.0	3.4	3.6	3.8	4.0
	29	-1.1	-1.1	-1.1	-1.1	-1.2	-0.7	-0.7	-0.7	-0.7	-0.7	-0.2	-0.2	-0.1	-0.1	-0.1	0.9	1.1	1.1	1.2	1.3	2.2	2.6	2.7	2.9	3.0
1	-35	3.3	3.8	4.0	4.2	4.4	3.8	4.4	4.6	4.8	5.1	4.5	5.2	5.4	5.7	6.0	6.2	7.1	7.4	7.8	8.2	8.2	9.4	9.9	10.4	10.9
4	-30	3.0	3.5	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.7	4.2	4.8	5.1	5.3	5.6	5.8	6.7	7.0	7.3	7.7	7.8	8.9	9.3	9.8	10.3
0	-25	2.6	3.0	3.1	3.3	3.5	3.1	3.6	3.7	3.9	4.1	3.8	4.3	4.5	4.8	5.0	5.3	6.1	6.4	6.7	7.1	7.2	8.2	8.6	9.1	9.6
0	-20	2.2	2.5	2.7	2.8	3.0	2.7	3.1	3.2	3.4	3.6	3.3	3.8	4.0	4.2	4.4	4.9	5.6	5.8	6.1	6.4	6.7	7.6	8.0	8.4	8.8
0	-15	1.8	2.1	2.2	2.3	2.5	2.3	2.6	2.8	2.9	3.1	2.9	3.4	3.5	3.7	3.9	4.4	5.0	5.3	5.5	5.8	6.1	7.0	7.4	7.7	8.1
	-10	1.4	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.4	2.5	2.5	2.9	3.0	3.2	3.3	3.9	4.5	4.7	4.9	5.2	5.6	6.4	6.7	7.1	7.4
	-5	1.0	1.2	1.3	1.3	1.4	1.4	1.7	1.8	1.9	2.0	2.0	2.3	2.5	2.6	2.7	3.4	3.9	4.1	4.3	4.5	5.0	5.8	6.0	6.3	6.7
	0	0.6	0.8	0.8	0.9	0.9	1.0	1.2	1.3	1.4	1.5	1.6	1.9	2.0	2.1	2.2	2.9	3.4	3.5	3.7	3.9	4.5	5.2	5.4	5.7	6.0
	5	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.9	0.9	1.0	1.2	1.4	1.5	1.6	1.7	2.5	2.9	3.0	3.2	3.3	4.0	4.6	4.8	5.1	5.3
	10	-0.1	-0.1	0.0	0.0	0.0	0.3	0.4	0.4	0.5	0.5	0.8	1.0	1.0	1.1	1.2	2.0	2.4	2.5	2.6	2.8	3.5	4.0	4.2	4.5	4.7
	15	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	0.0	0.0	0.0	0.1	0.4	0.6	0.6	0.7	0.7	1.6	1.9	2.0	2.1	2.2	3.0	3.5	3.7	3.9	4.1
	20	-0.8	-0.8	-0.8	-0.8	-0.8	-0.5	-0.4	-0.4	-0.4	-0.4	0.1	0.1	0.2	0.2	0.3	1.2	1.4	1.5	1.6	1.7	2.6	3.0	3.1	3.3	3.5
	25	-1.4	-1.5	-1.5	-1.6	-1.6	-1.1	-1.1	-1.1	-1.1	-1.2	-0.6	-0.6	-0.6	-0.6	-0.6	0.5	0.6	0.7	0.7	0.8	1.8	2.1	2.2	2.3	2.4
1	-35	2.3	2.6	2.7	2.9	3.0	2.7	3.1	3.3	3.5	3.6	3.4	3.9	4.1	4.3	4.5	4.9	5.6	5.9	6.1	6.5	6.8	7.7	8.1	8.5	8.9
6	-30	1.9	2.2	2.3	2.4	2.6	2.4	2.7	2.9	3.0	3.2	3.0	3.5	3.6	3.8	4.0	4.5	5.1	5.4	5.6	5.9	6.3	7.2	7.5	7.9	8.3
0	-25	1.6	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.6	2.7	2.6	3.0	3.2	3.3	3.5	4.1	4.6	4.9	5.1	5.4	5.8	6.7	7.0	7.3	7.7
0	-20	1.2	1.4	1.5	1.6	1.7	1.6	1.9	2.0	2.1	2.2	2.2	2.6	2.7	2.8	3.0	3.6	4.1	4.3	4.6	4.8	5.3	6.1	6.4	6.7	7.0
0	-15	0.8	1.0	1.1	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.8	2.1	2.2	2.4	2.5	3.2	3.7	3.8	4.0	4.2	4.9	5.5	5.8	6.1	6.4
	-10	0.5	0.6	0.6	0.7	0.8	0.9	1.1	1.1	1.2	1.3	1.4	1.7	1.8	1.9	2.0	2.8	3.2	3.3	3.5	3.7	4.4	5.0	5.2	5.5	5.8
	-5	0.1	0.2	0.2	0.2	0.3	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.3	1.4	1.5	2.3	2.6	2.8	2.9	3.1	3.8	4.4	4.6	4.8	5.1
	0	-0.3	-0.2	-0.2	-0.2	-0.2	0.1	0.2	0.2	0.3	0.3	0.6	0.8	0.8	0.9	1.0	1.8	2.1	2.3	2.4	2.5	3.3	3.8	4.0	4.2	4.4
	5	-0.7	-0.6	-0.6	-0.6	-0.6	-0.3	-0.2	-0.2	-0.2	-0.2	0.2	0.3	0.4	0.4	0.5	1.4	1.7	1.8	1.9	2.0	2.9	3.3	3.5	3.6	3.8
	10	-1.0	-1.0	-1.0	-1.0	-1.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.1	0.0	0.0	0.0	0.0	1.0	1.2	1.3	1.4	1.5	2.4	2.8	2.9	3.1	3.3
	15	-1.3	-1.4	-1.4	-1.4	-1.4	-1.0	-1.0	-1.0	-1.0	-1.0	-0.5	-0.4	-0.4	-0.4	-0.4	0.6	0.8	0.9	0.9	1.0	2.0	2.3	2.4	2.6	2.7
	20	-1.7	-1.8	-1.8	-1.8	-1.9	-1.4	-1.4	-1.4	-1.5	-1.5	-0.9	-0.9	-0.9	-0.9	-0.9	0.2	0.3	0.3	0.4	0.4	1.5	1.7	1.8	1.9	2.0
1	-35	1.2	1.4	1.5	1.6	1.7	1.6	1.9	2.0	2.1	2.2	2.2	2.6	2.7	2.8	3.0	3.6	4.1	4.3	4.5	4.8	5.3	6.1	6.4	6.7	7.0
8	-30	0.9	1.1	1.2	1.2	1.3	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.4	2.5	2.6	3.3	3.8	4.0	4.2	4.4	5.0	5.7	6.0	6.2	6.6
0	-25	0.6	0.7	0.8	0.8	0.9	1.0	1.2	1.2	1.3	1.4	1.6	1.8	1.9	2.0	2.1	2.9	3.3	3.5	3.6	3.8	4.5	5.1	5.4	5.7	5.9
0	-20	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.8	0.9	1.0	1.2	1.4	1.5	1.6	1.7	2.5	2.8	3.0	3.1	3.3	4.0	4.6	4.8	5.1	5.3
0	-15	-0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.4	0.5	0.5	0.8	1.0	1.1	1.1	1.2	2.1	2.4	2.5	2.6	2.8	3.6	4.1	4.3	4.5	4.8
	-10	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	0.0	0.0	0.1	0.1	0.5	0.6	0.6	0.7	0.7	1.7	1.9	2.0	2.1	2.3	3.1	3.6	3.8	4.0	4.2
	-5	-0.8	-0.8	-0.8	-0.8	-0.8	-0.4	-0.4	-0.4	-0.4	-0.4	0.1	0.2	0.2	0.2	0.3	1.2	1.5	1.5	1.6	1.7	2.7	3.1	3.2	3.4	3.6
	0	-1.2	-1.2	-1.2	-1.2	-1.2	-0.8	-0.8	-0.8	-0.8	-0.8	-0.3	-0.3	-0.2	-0.2	-0.2	0.8	1.0	1.0	1.1	1.2	2.2	2.5	2.7	2.8	3.0
	5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.1	-1.2	-1.2	-1.2	-1.2	-0.7	-0.6	-0.6	-0.6	-0.6	0.4	0.6	0.6	0.7	0.7	1.8	2.1	2.2	2.3	2.4
	10	-1.8	-1.9	-1.9	-2.0	-2.0	-1.5	-1.5	-1.5	-1.6	-1.6	-1.0	-1.0	-1.0	-1.0	-1.0	0.1	0.1	0.2	0.2	0.3	1.3	1.6	1.7	1.8	1.9
	15	-2.1	-2.2	-2.3	-2.3	-2.4	-1.8	-1.9	-1.9	-1.9	-2.0	-1.3	-1.4	-1.4	-1.4	-1.4	-0.3	-0.2	-0.2	-0.2	-0.2	0.9	1.1	1.2	1.3	1.4
	16	-2.2	-2.3	-2.4	-2.4	-2.5	-1.9	-2.0	-2.0	-2.0	-2.1	-1.4	-1.5	-1.5	-1.5	-1.6	-0.4	-0.4	-0.4	-0.3	-0.3	0.8	1.0	1.1	1.1	1.2

525AFM-06-01

Figure 4-40 (Sheet 8)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-35	4.0	4.6	4.9	5.2	5.6	4.2	4.9	5.2	5.5	5.8	4.4	5.2	5.5	5.8	6.2	4.7	5.5	5.8	6.1	6.5	4.9	5.8	6.1	6.5	6.9
	-30	4.0	4.6	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.4	5.2	5.5	5.8	6.2	4.7	5.5	5.8	6.1	6.5	4.9	5.8	6.1	6.5	6.9
	-25	4.0	4.6	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.4	5.2	5.5	5.8	6.2	4.7	5.5	5.8	6.1	6.5	4.9	5.8	6.1	6.5	6.9
	-20	4.0	4.6	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.4	5.2	5.5	5.8	6.2	4.7	5.5	5.8	6.1	6.5	5.0	5.8	6.1	6.5	6.9
	-15	4.0	4.7	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.4	5.2	5.5	5.8	6.1	4.7	5.5	5.8	6.1	6.5	5.0	5.8	6.1	6.5	6.9
	-10	4.0	4.7	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.5	5.2	5.5	5.8	6.2	4.7	5.5	5.8	6.1	6.5	5.0	5.8	6.1	6.5	6.9
	-5	4.0	4.7	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.5	5.2	5.5	5.8	6.2	4.7	5.5	5.8	6.1	6.5	5.0	5.8	6.1	6.5	6.9
	0	3.9	4.5	4.8	5.1	5.4	4.1	4.8	5.0	5.3	5.6	4.4	5.1	5.3	5.6	6.0	4.6	5.4	5.6	6.0	6.3	4.9	5.7	6.0	6.3	6.7
	5	3.8	4.4	4.6	4.9	5.2	4.0	4.6	4.9	5.2	5.5	4.2	4.9	5.2	5.5	5.8	4.5	5.2	5.5	5.8	6.2	4.8	5.5	5.8	6.1	6.5
	10	2.8	3.3	3.5	3.7	3.9	3.0	3.5	3.7	4.0	4.2	3.3	3.8	4.0	4.3	4.5	3.5	4.1	4.3	4.6	4.8	3.7	4.4	4.6	4.9	5.2
1	-35	3.9	4.5	4.8	5.1	5.4	4.1	4.8	5.0	5.3	5.7	4.3	5.0	5.3	5.7	6.0	4.6	5.3	5.6	6.0	6.4	4.8	5.6	6.0	6.3	6.7
0	-30	3.9	4.5	4.8	5.1	5.4	4.1	4.8	5.0	5.3	5.7	4.3	5.0	5.3	5.6	6.0	4.6	5.3	5.6	6.0	6.3	4.8	5.6	6.0	6.3	6.7
0	-25	3.9	4.5	4.8	5.0	5.4	4.1	4.8	5.0	5.3	5.6	4.3	5.0	5.3	5.6	6.0	4.6	5.3	5.6	6.0	6.3	4.8	5.6	6.0	6.3	6.7
0	-20	3.9	4.5	4.8	5.0	5.4	4.1	4.8	5.0	5.3	5.6	4.3	5.0	5.3	5.6	6.0	4.6	5.3	5.6	6.0	6.3	4.8	5.6	6.0	6.3	6.7
	-15	3.9	4.5	4.8	5.1	5.4	4.1	4.8	5.0	5.3	5.6	4.3	5.1	5.3	5.6	6.0	4.6	5.3	5.6	6.0	6.3	4.9	5.7	6.0	6.3	6.7
	-10	3.9	4.5	4.8	5.1	5.4	4.1	4.8	5.0	5.3	5.6	4.4	5.1	5.3	5.6	6.0	4.6	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7
	-5	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.3	5.6	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6
	0	3.7	4.3	4.6	4.8	5.1	3.9	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.4	5.2	5.4	5.7	6.1	4.7	5.5	5.7	6.1	6.4
	5	3.3	3.8	4.0	4.3	4.5	3.5	4.1	4.3	4.5	4.8	3.7	4.3	4.6	4.8	5.1	4.0	4.6	4.9	5.1	5.4	4.2	4.9	5.2	5.5	5.8
	10	2.4	2.8	2.9	3.1	3.3	2.6	3.0	3.2	3.4	3.6	2.8	3.2	3.4	3.6	3.9	3.0	3.5	3.7	3.9	4.2	3.2	3.8	4.0	4.2	4.5
2	-35	3.8	4.4	4.7	5.0	5.3	4.0	4.7	5.0	5.2	5.6	4.3	5.0	5.3	5.6	5.9	4.5	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6
0	-30	3.8	4.4	4.7	5.0	5.3	4.0	4.7	4.9	5.2	5.6	4.3	5.0	5.2	5.5	5.9	4.5	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6
0	-25	3.8	4.4	4.7	5.0	5.3	4.0	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.9	4.5	5.3	5.5	5.9	6.2	4.8	5.6	5.9	6.2	6.6
0	-20	3.8	4.4	4.7	5.0	5.3	4.0	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.9	4.5	5.3	5.5	5.9	6.2	4.8	5.6	5.9	6.2	6.6
	-15	3.8	4.5	4.7	5.0	5.3	4.0	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.9	4.5	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6
	-10	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.2	5.5	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6
	-5	3.7	4.3	4.6	4.8	5.1	3.9	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.4	5.1	5.4	5.7	6.1	4.7	5.4	5.7	6.1	6.4
	0	3.6	4.2	4.4	4.6	4.9	3.8	4.4	4.6	4.9	5.2	4.0	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.8	4.6	5.3	5.5	5.9	6.2
	5	2.8	3.3	3.4	3.6	3.9	3.0	3.5	3.7	3.9	4.1	3.2	3.7	4.0	4.2	4.4	3.5	4.0	4.2	4.5	4.7	3.7	4.3	4.5	4.8	5.1
	10	1.9	2.3	2.4	2.5	2.7	2.1	2.5	2.6	2.8	2.9	2.3	2.7	2.9	3.0	3.2	2.5	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8
3	-35	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.3	5.6	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.3	6.6
0	-30	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.3	5.6	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.3	6.6
0	-25	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.3	5.6	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6
0	-20	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.3	5.6	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.8	5.6	5.9	6.2	6.6
	-15	3.9	4.5	4.7	5.0	5.3	4.1	4.7	5.0	5.3	5.6	4.3	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.2	6.6
	-10	3.9	4.5	4.7	5.0	5.2	4.1	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.9	4.6	5.3	5.6	5.9	6.2	4.8	5.6	5.9	6.2	6.6
	-5	3.7	4.2	4.5	4.7	5.0	3.9	4.5	4.7	5.0	5.2	4.1	4.7	5.0	5.3	5.6	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3
	0	3.3	3.8	4.0	4.3	4.5	3.5	4.1	4.3	4.5	4.8	3.7	4.3	4.6	4.8	5.1	4.0	4.6	4.9	5.1	5.4	4.2	4.9	5.2	5.4	5.8
	5	2.3	2.7	2.9	3.0	3.2	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.8	2.9	3.4	3.6	3.8	4.1	3.2	3.7	3.9	4.1	4.4
	10	1.5	1.7	1.9	2.0	2.1	1.6	1.9	2.1	2.2	2.3	1.8	2.2	2.3	2.4	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2
4	-35	3.9	4.5	4.8	5.1	5.4	4.1	4.8	5.0	5.3	5.6	4.4	5.1	5.3	5.6	6.0	4.6	5.4	5.6	6.0	6.3	4.9	5.7	6.0	6.3	6.7
0	-30	3.9	4.5	4.8	5.0	5.3	4.1	4.8	5.0	5.3	5.6	4.4	5.0	5.3	5.6	6.0	4.6	5.3	5.6	5.9	6.3	4.9	5.6	6.0	6.3	6.7
0	-25	3.9	4.5	4.8	5.0	5.3	4.1	4.8	5.0	5.3	5.6	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.3	6.6
0	-20	3.9	4.5	4.8	5.0	5.3	4.1	4.8	5.0	5.3	5.6	4.4	5.1	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.9	5.6	5.9	6.3	6.6
	-15	3.9	4.5	4.8	5.0	5.3	4.1	4.8	5.0	5.3	5.6	4.4	5.1	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.3	4.9	5.7	5.9	6.3	6.6
	-10	3.8	4.4	4.6	4.8	5.1	4.0	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.1	4.8	5.5	5.8	6.1	6.4
	-5	3.5	4.1	4.3	4.5	4.8	3.7	4.3	4.5	4.8	5.1	4.0	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.2	5.5	5.7	6.1
	0	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.2	3.7	3.9	4.2	4.4	3.5	4.0	4.2	4.5	4.7	3.7	4.3	4.5	4.8	5.0
	5	1.9	2.2	2.3	2.4	2.6	2.0	2.4	2.5	2.7	2.8	2.2	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7
	10	1.0	1.3	1.4	1.4	1.6	1.2	1.5	1.6	1.7	1.8	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.2	2.3	1.8	2.2	2.3	2.4	2.6
5	-35	4.0	4.6	4.8	5.1	5.4	4.2	4.8	5.1	5.4	5.7	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.4	4.9	5.7	6.0	6.4	6.7
0	-30	4.0	4.6	4.8	5.1	5.4	4.2	4.8	5.1	5.4	5.7	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7
0	-25	4.0	4.6	4.8	5.1	5.4	4.2	4.8	5.1	5.3	5.6	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	4.9	5.7	6.0	6.3	6.7
0	-20	4.0	4.6	4.8	5.1	5.4	4.2	4.8	5.1	5.3	5.6	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7
	-15	4.0	4.6	4.8	5.1	5.4	4.2	4.8	5.1	5.3	5.6	4.4	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7
	-10	3.7	4.2	4.5	4.7	5.0	3.9	4.5	4.7	5.0	5.2	4.1	4.8	5.0	5.3	5.6	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2
	-5	3.4	3.9	4.1	4.3	4.6	3.6	4.1	4.3	4.6	4.8	3.8	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.8
	0	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.2	3.4	2.7	3.2	3.3	3.5	3.7	2.9	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3
	5	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.5	2.6	2.8	2.2	2.6	2.7	2.9	3.1
	10	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.9	2.0

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Figure 4-41 (Sheet 1 of 6)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS					11000 WIND KNOTS					10500 WIND KNOTS					9500 WIND KNOTS					8500 WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
0	-35	5.2	6.1	6.5	6.9	7.3	5.8	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.7	9.2	8.5	9.9	10.5	11.2	11.9	10.8	12.7	13.4	14.3	15.2
	-30	5.2	6.1	6.4	6.8	7.3	5.8	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.6	9.2	8.5	9.9	10.5	11.2	11.9	10.8	12.7	13.4	14.2	15.2
	-25	5.2	6.1	6.4	6.8	7.3	5.8	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.6	9.2	8.5	9.9	10.5	11.1	11.9	10.9	12.7	13.4	14.2	15.1
	-20	5.2	6.1	6.4	6.8	7.3	5.8	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.6	9.2	8.5	9.9	10.5	11.1	11.8	10.9	12.7	13.4	14.2	15.1
	-15	5.2	6.1	6.4	6.8	7.3	5.8	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.6	9.2	8.5	9.9	10.5	11.1	11.8	10.9	12.7	13.4	14.2	15.1
	-10	5.3	6.1	6.5	6.8	7.3	5.8	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.6	9.2	8.5	9.9	10.5	11.1	11.8	10.9	12.7	13.4	14.2	15.1
	-5	5.3	6.1	6.5	6.8	7.3	5.9	6.8	7.2	7.6	8.1	6.6	7.7	8.1	8.6	9.2	8.6	10.0	10.5	11.1	11.8	11.0	12.7	13.4	14.2	15.1
	0	5.2	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.5	7.6	8.0	8.4	9.0	8.4	9.8	10.3	10.9	11.6	10.8	12.5	13.2	14.0	14.8
	5	5.0	5.8	6.1	6.5	6.9	5.6	6.5	6.8	7.2	7.7	6.4	7.4	7.8	8.3	8.8	8.2	9.6	10.1	10.7	11.3	10.6	12.3	13.0	13.7	14.6
	10	4.0	4.7	4.9	5.2	5.5	4.5	5.3	5.6	5.9	6.3	5.3	6.1	6.5	6.8	7.3	6.9	8.1	8.5	9.0	9.6	9.1	10.6	11.2	11.9	12.7
1	-35	5.1	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.4	7.5	8.0	8.5	9.0	8.3	9.7	10.3	11.0	11.7	10.7	12.5	13.2	14.0	14.9
0	-30	5.1	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.4	7.5	8.0	8.4	9.0	8.3	9.7	10.3	10.9	11.6	10.7	12.5	13.2	14.0	14.9
0	-25	5.1	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.5	7.5	8.0	8.4	9.0	8.3	9.7	10.3	10.9	11.6	10.7	12.5	13.2	14.0	14.9
0	-20	5.1	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.5	7.5	8.0	8.4	9.0	8.4	9.7	10.3	10.9	11.6	10.7	12.5	13.2	14.0	14.8
	-15	5.1	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.5	7.5	8.0	8.4	9.0	8.4	9.7	10.3	10.9	11.6	10.8	12.5	13.2	14.0	14.8
	-10	5.2	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.9	6.5	7.6	8.0	8.4	9.0	8.4	9.8	10.3	10.9	11.6	10.8	12.5	13.2	14.0	14.8
	-5	5.1	5.9	6.2	6.6	7.0	5.7	6.6	6.9	7.3	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.2	10.8	11.5	10.7	12.4	13.1	13.9	14.7
	0	5.0	5.8	6.1	6.4	6.8	5.5	6.4	6.8	7.2	7.6	6.3	7.3	7.7	8.2	8.7	8.2	9.5	10.0	10.6	11.2	10.5	12.2	12.9	13.6	14.4
	5	4.5	5.2	5.5	5.8	6.1	5.0	5.8	6.2	6.5	6.9	5.8	6.7	7.1	7.5	7.9	7.5	8.7	9.2	9.8	10.4	9.8	11.4	12.0	12.7	13.5
	10	3.5	4.1	4.3	4.5	4.8	4.0	4.7	4.9	5.2	5.5	4.7	5.5	5.8	6.1	6.5	6.3	7.4	7.8	8.2	8.7	8.4	9.8	10.3	11.0	11.7
2	-35	5.0	5.9	6.2	6.6	7.0	5.6	6.5	6.9	7.3	7.8	6.4	7.4	7.9	8.4	8.9	8.3	9.6	10.2	10.8	11.5	10.6	12.4	13.1	13.9	14.8
0	-30	5.0	5.9	6.2	6.6	7.0	5.6	6.5	6.9	7.3	7.8	6.4	7.4	7.9	8.3	8.9	8.3	9.6	10.2	10.8	11.5	10.6	12.4	13.1	13.8	14.7
0	-25	5.1	5.9	6.2	6.6	7.0	5.6	6.5	6.9	7.3	7.8	6.4	7.4	7.9	8.3	8.8	8.3	9.6	10.2	10.8	11.5	10.6	12.4	13.0	13.8	14.7
0	-20	5.1	5.9	6.2	6.6	7.0	5.6	6.5	6.9	7.3	7.7	6.4	7.4	7.9	8.3	8.8	8.3	9.6	10.2	10.8	11.4	10.7	12.4	13.0	13.8	14.7
	-15	5.1	5.9	6.2	6.6	7.0	5.7	6.6	6.9	7.3	7.7	6.4	7.5	7.9	8.3	8.8	8.3	9.6	10.2	10.8	11.4	10.7	12.4	13.1	13.8	14.7
	-10	5.1	5.9	6.2	6.6	7.0	5.7	6.6	6.9	7.3	7.7	6.4	7.5	7.9	8.3	8.8	8.3	9.7	10.2	10.8	11.4	10.7	12.4	13.1	13.8	14.7
	-5	5.0	5.8	6.1	6.4	6.8	5.5	6.4	6.8	7.1	7.6	6.3	7.3	7.7	8.1	8.6	8.2	9.5	10.0	10.6	11.2	10.5	12.2	12.9	13.6	14.4
	0	4.8	5.6	5.9	6.2	6.6	5.4	6.2	6.6	6.9	7.3	6.1	7.1	7.5	7.9	8.4	8.0	9.2	9.7	10.3	10.9	10.3	11.9	12.6	13.3	14.1
	5	4.0	4.6	4.8	5.1	5.4	4.5	5.2	5.5	5.8	6.1	5.2	6.0	6.4	6.7	7.1	6.9	8.0	8.4	8.9	9.5	9.1	10.5	11.1	11.8	12.5
	10	3.0	3.5	3.7	3.9	4.1	3.5	4.1	4.3	4.5	4.8	4.2	4.8	5.1	5.4	5.7	5.7	6.7	7.0	7.4	7.9	7.7	8.9	9.4	10.0	10.6
3	-35	5.1	5.9	6.3	6.6	7.0	5.7	6.6	7.0	7.4	7.8	6.4	7.5	7.9	8.4	8.9	8.3	9.7	10.2	10.8	11.5	10.7	12.4	13.1	13.9	14.8
0	-30	5.1	5.9	6.2	6.6	7.0	5.7	6.6	6.9	7.4	7.8	6.4	7.5	7.9	8.4	8.9	8.3	9.7	10.2	10.8	11.5	10.7	12.4	13.1	13.9	14.7
0	-25	5.1	5.9	6.2	6.6	7.0	5.7	6.6	6.9	7.3	7.8	6.4	7.5	7.9	8.4	8.9	8.3	9.7	10.2	10.8	11.5	10.7	12.4	13.1	13.9	14.7
0	-20	5.1	5.9	6.2	6.6	7.0	5.7	6.6	6.9	7.3	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.2	10.8	11.5	10.7	12.4	13.1	13.8	14.7
	-15	5.1	5.9	6.2	6.6	7.0	5.7	6.6	7.0	7.3	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.2	10.8	11.5	10.8	12.4	13.1	13.8	14.7
	-10	5.1	5.9	6.2	6.5	6.9	5.7	6.6	6.9	7.3	7.7	6.4	7.5	7.9	8.3	8.8	8.3	9.6	10.2	10.7	11.4	10.7	12.4	13.0	13.8	14.6
	-5	4.9	5.6	5.9	6.3	6.6	5.5	6.3	6.6	7.0	7.4	6.2	7.2	7.6	8.0	8.5	8.1	9.3	9.8	10.4	11.0	10.4	12.0	12.7	13.4	14.2
	0	4.5	5.2	5.5	5.8	6.1	5.1	5.8	6.2	6.5	6.9	5.8	6.7	7.1	7.5	7.9	7.6	8.7	9.2	9.7	10.3	9.9	11.4	12.0	12.7	13.5
	5	3.4	4.0	4.2	4.4	4.7	3.9	4.6	4.8	5.1	5.4	4.6	5.4	5.7	6.0	6.3	6.2	7.2	7.6	8.1	8.6	8.3	9.6	10.2	10.8	11.4
	10	2.5	2.9	3.1	3.3	3.5	3.0	3.5	3.7	3.9	4.1	3.6	4.2	4.5	4.7	5.0	5.1	6.0	6.3	6.7	7.1	7.0	8.1	8.6	9.1	9.7
4	-35	5.1	6.0	6.3	6.7	7.1	5.7	6.6	7.0	7.4	7.8	6.5	7.5	8.0	8.4	8.9	8.4	9.7	10.3	10.9	11.6	10.8	12.5	13.2	13.9	14.8
0	-30	5.1	6.0	6.3	6.6	7.0	5.7	6.6	7.0	7.4	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.3	10.9	11.5	10.8	12.5	13.1	13.9	14.7
0	-25	5.2	6.0	6.3	6.6	7.0	5.7	6.6	7.0	7.4	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.3	10.8	11.5	10.8	12.5	13.1	13.9	14.7
0	-20	5.2	6.0	6.3	6.6	7.0	5.7	6.6	7.0	7.4	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.3	10.8	11.5	10.8	12.5	13.1	13.9	14.7
	-15	5.2	6.0	6.3	6.6	7.0	5.7	6.6	7.0	7.4	7.8	6.5	7.5	7.9	8.4	8.9	8.4	9.7	10.3	10.8	11.5	10.8	12.5	13.1	13.9	14.7
	-10	5.0	5.8	6.1	6.4	6.8	5.6	6.4	6.8	7.2	7.6	6.4	7.3	7.7	8.2	8.6	8.2	9.5	10.0	10.6	11.2	10.6	12.2	12.9	13.6	14.4
	-5	4.8	5.5	5.8	6.1	6.4	5.3	6.1	6.5	6.8	7.2	6.1	7.0	7.4	7.8	8.2	7.9	9.1	9.6	10.1	10.7	10.2	11.8	12.4	13.1	13.9
	0	4.0	4.6	4.8	5.1	5.4	4.5	5.2	5.5	5.8	6.1	5.2	6.0	6.4	6.7	7.1	6.9	8.0	8.4	8.9	9.4	9.1	10.5	11.1	11.7	12.4
	5	2.9	3.4	3.6	3.8	4.0	3.4	4.0	4.2	4.4	4.7	4.1	4.8	5.0	5.3	5.6	5.7	6.5	6.9	7.3	7.7	7.6	8.8	9.3	9.8	10.4
	10	2.0	2.4	2.5	2.7	2.9	2.5	2.9	3.1	3.3	3.5	3.1	3.7	3.9	4.1	4.3	4.6	5.3	5.6	6.0	6.3	6.4	7.4	7.8	8.3	8.8
5	-35	5.2	6.0	6.3	6.7	7.1	5.8	6.7	7.1	7.4	7.9	6.6	7.6	8.0	8.5	9.0	8.5	9.8	10.3	10.9	11.6	10.9	12.5	13.2	14.0	14.8
0	-30	5.2	6.0	6.3	6.7	7.1	5.8	6.7	7.0	7.4	7.9	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.9	11.6	10.9	12.5	13.2	13.9	14.8
0	-25	5.2	6.0	6.3	6.7	7.1	5.8	6.7	7.0	7.4	7.8	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.9	11.5	10.9	12.5	13.2	13.9	14.7
0	-20	5.2	6.0	6.3	6.7	7.0	5.8	6.7	7.0	7.4	7.8	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.9	11.5	10.9	12.5	13.2	13.9	14.7
	-15	5.2	6.0	6.3	6.7	7.0	5.8	6.7	7.0	7.4	7.8	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.9	11.5	10.9	12.5	13.2	13.9	14.7
	-10	4.9	5.7	5.9	6.3	6.6	5.5	6.3	6.6	7.0	7.4	6.2	7.2	7.6	8.0	8.4	8.1	9.3	9.8	10.3	10.9	10.5	12.0	12.6	13.3	14.1
	-5	4.6	5.3	5.5	5.8	6.2	5.1	5.9	6.2	6.6	6.9	5.9	6.8	7.1	7.5	7.9	7.7	8.8	9.3	9.8	10.4	10.0	11.5	12.1	12.8	13.5
	0	3.4	4.0	4.2	4.4	4.7	3.9	4.6	4.8	5.1	5.3	4.6	5.4	5.6	5.9	6.3	6.2	7.2	7.6	8.0	8.5	8.3	9.6	10.1	10.7	11.3
	5	2.4	2.8	3.0	3.2	3.4	2.9	3.4	3.6	3.8	4.0	3.6	4.1	4.4	4.6	4.9	5.1	5.9	6.2	6.5	6.9	6.9	8.0	8.4	8.9	9.5
	10	1.6	1.9	2.0	2.1	2.3	2.0	2.4	2.5	2.7	2.8	2.6	3.1	3.3	3.4	3.7	4.0	4.7	5.0	5.2	5.6	5.8	6.7	7.1	7.5	7.9

525AFM-06-00

Figure 4-41 (Sheet 2)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																									
		12375					12200					12000					11800					11600					
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	
6	-35	4.0	4.6	4.9	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	4.7	5.5	5.7	6.0	6.4	5.0	5.8	6.1	6.4	6.8	
0	-30	4.0	4.6	4.9	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.4	5.0	5.7	6.0	6.4	6.7	
0	-25	4.0	4.6	4.9	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.4	5.0	5.7	6.0	6.4	6.7	
0	-20	4.0	4.6	4.8	5.1	5.4	4.2	4.9	5.1	5.4	5.7	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.4	6.7	
	-15	3.9	4.5	4.7	4.9	5.2	4.1	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.8	4.6	5.3	5.5	5.8	6.2	4.9	5.6	5.9	6.2	6.5	
	-10	3.5	4.1	4.3	4.5	4.7	3.7	4.3	4.5	4.8	5.0	4.0	4.6	4.8	5.1	5.3	4.2	4.9	5.1	5.4	5.7	4.5	5.2	5.4	5.7	6.0	
	-5	2.9	3.4	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.3	4.5	3.6	4.1	4.3	4.6	4.8	3.8	4.4	4.6	4.9	5.1	
	0	1.9	2.2	2.3	2.4	2.6	2.0	2.4	2.5	2.7	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	
	5	1.0	1.2	1.3	1.4	1.5	1.1	1.4	1.5	1.6	1.7	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.1	2.2	1.8	2.1	2.2	2.3	2.5	
	10	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.9	0.8	0.9	1.0	1.1	1.2	0.9	1.2	1.2	1.3	1.4	
7	-35	4.0	4.6	4.8	5.1	5.4	4.2	4.8	5.1	5.4	5.7	4.5	5.1	5.4	5.7	6.0	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.7	
0	-30	4.0	4.6	4.8	5.1	5.3	4.2	4.8	5.1	5.3	5.6	4.4	5.1	5.4	5.6	5.9	4.7	5.4	5.7	6.0	6.3	5.0	5.7	6.0	6.3	6.6	
0	-25	3.9	4.5	4.7	5.0	5.3	4.1	4.8	5.0	5.3	5.5	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.6	
0	-20	3.9	4.5	4.7	4.9	5.2	4.1	4.7	4.9	5.2	5.5	4.3	5.0	5.2	5.5	5.8	4.6	5.3	5.5	5.8	6.1	4.9	5.6	5.8	6.2	6.5	
	-15	3.6	4.2	4.4	4.6	4.9	3.8	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.2	5.4	4.3	5.0	5.2	5.5	5.8	4.6	5.3	5.5	5.8	6.1	
	-10	3.3	3.8	4.0	4.2	4.4	3.5	4.0	4.2	4.5	4.7	3.8	4.3	4.5	4.8	5.0	4.0	4.6	4.8	5.1	5.3	4.3	4.9	5.1	5.4	5.7	
	-5	2.4	2.8	2.9	3.1	3.3	2.6	3.0	3.2	3.3	3.5	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	
	0	1.4	1.7	1.8	1.9	2.0	1.6	1.8	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.6	2.7	2.9	3.0	
	5	0.6	0.7	0.8	0.8	0.9	0.7	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9	
	10	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.9	
8	-35	3.9	4.5	4.7	5.0	5.3	4.1	4.8	5.0	5.3	5.5	4.4	5.0	5.3	5.6	5.9	4.6	5.3	5.6	5.9	6.2	4.9	5.6	5.9	6.2	6.6	
0	-30	3.9	4.5	4.7	4.9	5.2	4.1	4.7	4.9	5.2	5.5	4.4	5.0	5.2	5.5	5.8	4.6	5.3	5.6	5.8	6.2	4.9	5.6	5.9	6.2	6.5	
0	-25	3.9	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.1	5.4	4.3	5.0	5.2	5.5	5.8	4.6	5.2	5.5	5.8	6.1	4.8	5.5	5.8	6.1	6.4	
0	-20	3.8	4.3	4.5	4.8	5.0	4.0	4.5	4.8	5.0	5.3	4.2	4.8	5.1	5.3	5.6	4.5	5.1	5.4	5.7	5.9	4.7	5.4	5.7	6.0	6.3	
	-15	3.4	3.9	4.1	4.3	4.5	3.6	4.1	4.3	4.5	4.8	3.8	4.4	4.6	4.8	5.1	4.1	4.7	4.9	5.1	5.4	4.3	5.0	5.2	5.5	5.8	
	-10	2.9	3.3	3.5	3.7	3.9	3.1	3.5	3.7	3.9	4.1	3.3	3.8	4.0	4.2	4.4	3.6	4.1	4.3	4.5	4.8	3.8	4.4	4.6	4.8	5.1	
	-5	1.9	2.2	2.4	2.5	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.3	3.4	2.8	3.2	3.4	3.5	3.7	
	0	1.0	1.2	1.2	1.3	1.4	1.1	1.4	1.4	1.5	1.6	1.3	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.2	1.7	2.0	2.2	2.3	2.4	
	5	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.7	0.8	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3	
	10	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	
9	-35	3.7	4.3	4.5	4.7	5.0	3.9	4.5	4.7	5.0	5.2	4.2	4.8	5.0	5.3	5.6	4.4	5.1	5.3	5.6	5.9	4.7	5.4	5.7	5.9	6.3	
0	-30	3.6	4.1	4.3	4.5	4.8	3.8	4.4	4.6	4.8	5.1	4.0	4.6	4.9	5.1	5.4	4.3	4.9	5.2	5.4	5.7	4.6	5.2	5.5	5.8	6.1	
0	-25	3.5	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.6	4.9	3.9	4.5	4.7	4.9	5.2	4.2	4.8	5.0	5.3	5.5	4.4	5.1	5.3	5.6	5.9	
0	-20	3.1	3.5	3.7	3.9	4.1	3.3	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.4	4.7	3.7	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.1	5.3	
	-15	2.4	2.8	3.0	3.1	3.3	2.6	3.0	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	3.9	4.2	3.3	3.8	4.0	4.3	4.5	
	-10	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.6	2.7	2.9	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.3	3.5	
	-5	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	2.0	1.6	1.9	2.0	2.1	2.2	
	0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.7	0.7	0.8	0.8	0.7	0.9	0.9	1.0	1.1	
	5	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	
	10	-1.4	-1.4	-1.5	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	
1	-35	3.4	3.9	4.1	4.4	4.6	3.6	4.2	4.4	4.6	4.9	3.9	4.5	4.7	4.9	5.2	4.1	4.7	5.0	5.2	5.5	4.4	5.0	5.3	5.6	5.9	
0	-30	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.7	4.2	4.4	4.7	4.9	4.0	4.5	4.7	5.0	5.2	4.2	4.8	5.1	5.3	5.6	
0	-25	3.1	3.5	3.7	3.9	4.1	3.3	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.7	3.8	4.3	4.5	4.7	5.0	4.0	4.6	4.8	5.1	5.3	
0	-20	2.3	2.7	2.8	3.0	3.2	2.5	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	
0	-15	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.5	2.0	2.3	2.4	2.6	2.7	2.2	2.6	2.7	2.9	3.0	2.4	2.8	3.0	3.1	3.3	
	-10	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	
	-5	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.8	0.8	
	0	-0.9	-0.9	-0.9	-0.9	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	
	5	-1.6	-1.6	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.6	-1.6	-1.3	-1.3	-1.3	-1.4	-1.4	-1.1	-1.1	-1.1	-1.2	-1.2	-0.9	-0.9	-0.9	-1.0	-1.0	
	10	-2.1	-2.3	-2.3	-2.4	-2.5	-2.0	-2.1	-2.2	-2.2	-2.3	-1.8	-2.0	-2.0	-2.1	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9	-1.5	-1.6	-1.6	-1.7	-1.7	
1	-35	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.6	3.7	4.2	4.4	4.6	4.9	3.9	4.5	4.7	5.0	5.2	
1	-30	2.8	3.2	3.4	3.5	3.7	3.0	3.4	3.6	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	3.7	4.3	4.5	4.7	4.9	
0	-25	2.5	2.8	3.0	3.1	3.3	2.7	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.9	3.1	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.5	
0	-20	1.9	2.2	2.3	2.4	2.5	2.0	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.5	3.7	
0	-15	1.1	1.4	1.4	1.5	1.6	1.3	1.6	1.6	1.7	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.3	2.4	2.0	2.3	2.4	2.5	2.7	
	-10	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.9	0.8	0.9	1.0	1.1	1.2	1.0	1.2	1.3	1.3	1.4	
	-5	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	
	0	-1.3	-1.4	-1.4	-1.4	-1.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	
	5	-1.9	-2.0	-2.1	-2.1	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0	-1.6	-1.7	-1.7	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.4	
	10	-2.5	-2.6	-2.7	-2.8	-2.9	-2.3	-2.5	-2.6	-2.6	-2.7	-2.2	-2.3	-2.4	-2.5	-2.5	-2.0	-2.2	-2.2	-2.3	-2.4	-1.9	-2.0	-2.1	-2.1	-2.2	

525AFM-05-00

Figure 4-41 (Sheet 3)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 11400 WIND KNOTS					11000 WIND KNOTS					10500 WIND KNOTS					9500 WIND KNOTS					8500 WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
6	-35	5.3	6.1	6.4	6.7	7.1	5.8	6.7	7.1	7.5	7.9	6.6	7.6	8.1	8.5	9.0	8.5	9.9	10.4	11.0	11.6	10.9	12.6	13.3	14.0	14.8
0	-30	5.3	6.1	6.4	6.7	7.1	5.8	6.7	7.1	7.5	7.9	6.6	7.6	8.0	8.5	9.0	8.5	9.8	10.4	10.9	11.6	10.9	12.6	13.3	14.0	14.8
0	-25	5.3	6.1	6.4	6.7	7.1	5.8	6.7	7.1	7.5	7.9	6.6	7.6	8.0	8.5	8.9	8.6	9.8	10.4	10.9	11.6	11.0	12.6	13.2	14.0	14.8
0	-20	5.3	6.1	6.4	6.7	7.1	5.9	6.7	7.1	7.4	7.9	6.6	7.6	8.0	8.5	8.9	8.6	9.8	10.4	10.9	11.5	11.0	12.6	13.2	13.9	14.7
	-15	5.1	5.9	6.2	6.5	6.9	5.7	6.6	6.9	7.2	7.6	6.5	7.5	7.8	8.3	8.7	8.4	9.6	10.1	10.7	11.3	10.8	12.4	13.0	13.7	14.5
	-10	4.8	5.5	5.7	6.0	6.4	5.3	6.1	6.4	6.7	7.1	6.1	7.0	7.3	7.7	8.2	7.9	9.1	9.5	10.0	10.6	10.2	11.7	12.3	13.0	13.7
	-5	4.1	4.7	4.9	5.2	5.5	4.6	5.3	5.6	5.9	6.2	5.3	6.1	6.4	6.8	7.2	7.0	8.1	8.5	9.0	9.5	9.2	10.6	11.2	11.8	12.5
	0	2.9	3.4	3.6	3.8	4.0	3.4	4.0	4.2	4.4	4.7	4.1	4.8	5.0	5.3	5.6	5.7	6.5	6.9	7.3	7.7	7.6	8.8	9.3	9.8	10.4
	5	2.0	2.3	2.4	2.6	2.8	2.4	2.8	3.0	3.2	3.4	3.1	3.6	3.8	4.0	4.2	4.5	5.2	5.5	5.8	6.2	6.3	7.3	7.7	8.1	8.6
	10	1.2	1.4	1.5	1.6	1.7	1.6	1.9	2.0	2.1	2.3	2.2	2.5	2.7	2.8	3.0	3.5	4.1	4.3	4.6	4.8	5.2	6.0	6.3	6.7	7.1
7	-35	5.2	6.0	6.3	6.7	7.1	5.8	6.7	7.0	7.4	7.8	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.9	11.5	10.9	12.6	13.2	13.9	14.7
0	-30	5.2	6.0	6.3	6.6	7.0	5.8	6.7	7.0	7.4	7.8	6.6	7.6	8.0	8.4	8.9	8.5	9.8	10.3	10.8	11.5	10.9	12.5	13.2	13.9	14.6
0	-25	5.2	5.9	6.2	6.6	6.9	5.8	6.6	6.9	7.3	7.7	6.5	7.5	7.9	8.3	8.8	8.4	9.7	10.2	10.7	11.3	10.8	12.4	13.1	13.8	14.5
0	-20	5.1	5.9	6.2	6.5	6.9	5.7	6.5	6.9	7.2	7.6	6.5	7.4	7.8	8.2	8.7	8.4	9.6	10.1	10.6	11.2	10.8	12.3	13.0	13.6	14.4
	-15	4.9	5.6	5.8	6.1	6.5	5.4	6.2	6.5	6.9	7.2	6.2	7.1	7.5	7.8	8.3	8.0	9.2	9.7	10.2	10.8	10.4	11.9	12.5	13.2	13.9
	-10	4.5	5.2	5.4	5.7	6.0	5.1	5.8	6.1	6.4	6.8	5.8	6.7	7.0	7.4	7.8	7.6	8.7	9.1	9.6	10.2	9.9	11.3	11.9	12.5	13.2
	-5	3.5	4.1	4.3	4.5	4.7	4.0	4.7	4.9	5.2	5.4	4.7	5.5	5.7	6.0	6.4	6.4	7.3	7.7	8.1	8.6	8.4	9.7	10.2	10.8	11.4
	0	2.4	2.8	3.0	3.1	3.3	2.9	3.4	3.5	3.7	4.0	3.6	4.1	4.3	4.6	4.8	5.1	5.8	6.1	6.5	6.8	6.9	8.0	8.4	8.9	9.4
	5	1.5	1.8	1.9	2.0	2.2	2.0	2.3	2.4	2.6	2.7	2.6	3.0	3.2	3.3	3.5	4.0	4.6	4.8	5.1	5.4	5.7	6.6	6.9	7.3	7.8
	10	0.7	0.9	1.0	1.1	1.1	1.1	1.4	1.5	1.6	1.7	1.7	2.0	2.1	2.3	2.4	3.0	3.5	3.7	3.9	4.1	4.6	5.3	5.6	6.0	6.3
8	-35	5.2	6.0	6.3	6.6	6.9	5.8	6.6	7.0	7.3	7.7	6.5	7.5	7.9	8.3	8.8	8.5	9.7	10.2	10.8	11.4	10.9	12.5	13.1	13.8	14.6
0	-30	5.2	5.9	6.2	6.5	6.9	5.7	6.6	6.9	7.3	7.7	6.5	7.5	7.9	8.3	8.7	8.4	9.7	10.2	10.7	11.3	10.8	12.4	13.0	13.7	14.5
0	-25	5.1	5.9	6.1	6.5	6.8	5.7	6.5	6.8	7.2	7.6	6.5	7.4	7.8	8.2	8.6	8.4	9.6	10.1	10.6	11.2	10.8	12.3	12.9	13.6	14.4
0	-20	5.0	5.7	6.0	6.3	6.7	5.6	6.4	6.7	7.1	7.4	6.4	7.3	7.6	8.0	8.5	8.2	9.4	9.9	10.4	11.0	10.6	12.1	12.7	13.4	14.1
	-15	4.6	5.3	5.5	5.8	6.1	5.1	5.9	6.2	6.5	6.8	5.9	6.8	7.1	7.5	7.9	7.7	8.8	9.2	9.7	10.3	10.0	11.5	12.0	12.7	13.4
	-10	4.1	4.7	4.9	5.1	5.4	4.6	5.3	5.5	5.8	6.1	5.3	6.1	6.4	6.7	7.1	7.0	8.0	8.4	8.9	9.4	9.2	10.6	11.1	11.7	12.4
	-5	3.0	3.5	3.6	3.8	4.1	3.5	4.0	4.2	4.5	4.7	4.2	4.8	5.0	5.3	5.6	5.7	6.6	6.9	7.3	7.7	7.7	8.8	9.3	9.8	10.4
	0	2.0	2.3	2.4	2.6	2.7	2.4	2.8	3.0	3.1	3.3	3.0	3.5	3.7	3.9	4.1	4.5	5.2	5.5	5.7	6.1	6.3	7.2	7.6	8.0	8.5
	5	1.1	1.3	1.4	1.5	1.6	1.5	1.8	1.9	2.0	2.1	2.1	2.4	2.6	2.7	2.9	3.4	4.0	4.2	4.4	4.7	5.1	5.9	6.2	6.5	6.9
	10	0.3	0.4	0.5	0.5	0.6	0.7	0.9	1.0	1.0	1.1	1.2	1.5	1.6	1.7	1.8	2.5	2.9	3.1	3.3	3.5	4.0	4.7	5.0	5.2	5.6
9	-35	5.0	5.7	6.0	6.3	6.6	5.5	6.4	6.7	7.0	7.4	6.3	7.2	7.6	8.0	8.5	8.2	9.4	9.9	10.4	11.0	10.6	12.1	12.7	13.4	14.1
0	-30	4.8	5.5	5.8	6.1	6.4	5.4	6.2	6.5	6.8	7.2	6.2	7.1	7.4	7.8	8.2	8.0	9.2	9.6	10.2	10.7	10.4	11.9	12.5	13.1	13.8
0	-25	4.7	5.4	5.6	5.9	6.2	5.3	6.0	6.3	6.6	7.0	6.0	6.9	7.2	7.6	8.0	7.8	9.0	9.4	9.9	10.5	10.2	11.6	12.2	12.9	13.6
0	-20	4.3	4.9	5.1	5.4	5.7	4.8	5.5	5.8	6.1	6.4	5.5	6.4	6.7	7.0	7.4	7.3	8.3	8.7	9.2	9.7	9.5	10.9	11.5	12.1	12.7
	-15	3.6	4.1	4.3	4.6	4.8	4.1	4.7	5.0	5.2	5.5	4.8	5.5	5.8	6.1	6.4	6.4	7.4	7.8	8.2	8.6	8.6	9.8	10.3	10.9	11.5
	-10	2.8	3.2	3.4	3.6	3.8	3.3	3.8	4.0	4.2	4.4	3.9	4.5	4.8	5.0	5.3	5.5	6.3	6.6	7.0	7.3	7.3	8.5	8.9	9.4	9.9
	-5	1.8	2.1	2.2	2.4	2.5	2.3	2.6	2.8	2.9	3.1	2.9	3.3	3.5	3.7	3.9	4.3	5.0	5.2	5.5	5.8	6.0	7.0	7.4	7.8	8.2
	0	0.9	1.1	1.2	1.3	1.4	1.3	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.5	2.6	3.2	3.7	3.9	4.2	4.4	4.8	5.6	5.9	6.2	6.6
	5	0.1	0.2	0.3	0.3	0.4	0.5	0.7	0.7	0.8	0.9	1.1	1.3	1.4	1.5	1.6	2.3	2.7	2.8	3.0	3.2	3.8	4.4	4.7	4.9	5.2
	10	-0.6	-0.5	-0.5	-0.5	-0.5	-0.2	-0.1	-0.1	-0.1	0.0	0.3	0.5	0.5	0.6	0.6	1.5	1.8	1.9	2.0	2.1	2.9	3.4	3.6	3.8	4.0
1	-35	4.7	5.4	5.6	5.9	6.2	5.3	6.0	6.3	6.6	7.0	6.0	6.9	7.2	7.6	8.0	7.8	9.0	9.4	9.9	10.5	10.2	11.6	12.2	12.9	13.6
0	-30	4.5	5.1	5.4	5.6	5.9	5.0	5.8	6.0	6.4	6.7	5.8	6.6	7.0	7.3	7.7	7.5	8.6	9.1	9.6	10.1	9.9	11.3	11.9	12.5	13.2
0	-25	4.3	4.9	5.1	5.4	5.7	4.8	5.5	5.8	6.1	6.4	5.6	6.4	6.7	7.0	7.4	7.3	8.3	8.8	9.2	9.7	9.6	11.0	11.5	12.1	12.8
0	-20	3.5	4.0	4.2	4.4	4.7	4.0	4.6	4.8	5.1	5.4	4.7	5.4	5.7	6.0	6.3	6.3	7.3	7.6	8.0	8.5	8.4	9.7	10.2	10.7	11.3
0	-15	2.7	3.1	3.3	3.4	3.6	3.2	3.7	3.8	4.1	4.3	3.8	4.4	4.6	4.9	5.1	5.4	6.2	6.5	6.8	7.2	7.2	8.3	8.7	9.2	9.8
	-10	1.6	1.9	2.0	2.2	2.3	2.1	2.4	2.6	2.7	2.9	2.7	3.1	3.3	3.5	3.7	4.1	4.7	5.0	5.3	5.6	5.8	6.7	7.1	7.5	7.9
	-5	0.7	0.9	0.9	1.0	1.1	1.1	1.3	1.4	1.5	1.6	1.7	2.0	2.1	2.2	2.4	3.0	3.5	3.6	3.9	4.1	4.6	5.3	5.6	5.9	6.2
	0	-0.1	0.0	0.1	0.1	0.1	0.3	0.5	0.5	0.6	0.6	0.9	1.1	1.1	1.2	1.3	2.1	2.4	2.6	2.7	2.9	3.5	4.1	4.4	4.6	4.9
	5	-0.8	-0.7	-0.7	-0.7	-0.7	-0.4	-0.3	-0.3	-0.3	-0.3	0.1	0.2	0.3	0.3	0.3	1.2	1.5	1.6	1.7	1.8	2.6	3.1	3.2	3.4	3.7
	10	-1.4	-1.4	-1.5	-1.5	-1.5	-1.0	-1.0	-1.1	-1.1	-1.1	-0.6	-0.5	-0.5	-0.5	-0.5	0.5	0.7	0.7	0.8	0.9	1.8	2.1	2.3	2.4	2.6
1	-35	4.2	4.8	5.0	5.3	5.6	4.7	5.4	5.7	6.0	6.3	5.5	6.3	6.6	6.9	7.3	7.2	8.2	8.7	9.1	9.6	9.5	10.8	11.4	12.0	12.6
1	-30	4.0	4.6	4.8	5.0	5.3	4.5	5.2	5.4	5.7	6.0	5.3	6.0	6.3	6.6	7.0	7.0	8.0	8.4	8.8	9.3	9.2	10.5	11.0	11.6	12.2
0	-25	3.6	4.1	4.4	4.6	4.8	4.2	4.8	5.0	5.2	5.5	4.9	5.6	5.9	6.2	6.5	6.5	7.5	7.8	8.2	8.7	8.7	9.9	10.4	10.9	11.5
0	-20	3.0	3.4	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.7	4.2	4.8	5.0	5.3	5.6	5.7	6.6	6.9	7.3	7.7	7.7	8.8	9.3	9.8	10.3
0	-15	2.2	2.5	2.7	2.8	3.0	2.7	3.1	3.2	3.4	3.6	3.3	3.8	4.0	4.2	4.4	4.8	5.5	5.8	6.1	6.4	6.6	7.6	8.0	8.4	8.9
	-10	1.2	1.4	1.5	1.6	1.7	1.6	1.9	2.0	2.1	2.3	2.2	2.6	2.7	2.9	3.0	3.6	4.1	4.3	4.6	4.8	5.2	6.0	6.4	6.7	7.1
	-5	0.3	0.4	0.5	0.5	0.6	0.7	0.9	0.9	1.0	1.1	1.2	1.5	1.6	1.7	1.8	2.5	2.9	3.1	3.2	3.4	4.0	4.7	4.9	5.2	5.5
	0	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	0.0	0.0	0.1	0.1	0.4	0.6	0.6	0.7	0.8	1.6	1.9	2.0	2.1	2.3	3.0	3.5	3.7	3.9	4.2
	5	-1.1	-1.2	-1.2	-1.2	-1.2	-0.8	-0.8	-0.8	-0.8	-0.8	-0.3	-0.2	-0.2	-0.2	-0.1	0.8	1.0	1.1	1.2	1.3	2.1	2.5	2.7	2.8	3.0
	10	-1.7	-1.8	-1.9	-1.9	-2.0	-1.4	-1.5	-1.5	-1.5	-1.5	-0.9	-1.0	-1.0	-1.0	-1.0	0.1	0.2	0.2	0.3	0.3	1.3	1.6	1.7	1.8	2.0

525AFM-06-00

Figure 4-41 (Sheet 4)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT
FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11800					11600				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.3	3.4	3.6	2.9	3.4	3.5	3.7	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.1	4.3	4.6
2	-30	2.4	2.7	2.9	3.0	3.2	2.5	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7	3.0	3.5	3.6	3.8	4.0	3.3	3.7	3.9	4.1	4.3
0	-25	1.9	2.3	2.4	2.5	2.6	2.1	2.5	2.6	2.7	2.9	2.4	2.7	2.8	3.0	3.2	2.6	3.0	3.1	3.3	3.5	2.8	3.2	3.4	3.6	3.8
0	-20	1.5	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.3	2.4	2.5	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1
0	-15	0.7	0.8	0.9	1.0	1.0	0.8	1.0	1.1	1.2	1.2	1.0	1.2	1.3	1.4	1.5	1.2	1.5	1.6	1.7	1.8	1.4	1.7	1.8	1.9	2.0
	-10	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.7	0.7	0.8	0.9
	-5	-1.0	-1.0	-1.0	-1.0	-1.0	-0.8	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2
	0	-1.7	-1.8	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.7	-1.7	-1.4	-1.4	-1.5	-1.5	-1.5	-1.2	-1.2	-1.3	-1.3	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1
	5	-2.2	-2.4	-2.4	-2.5	-2.6	-2.1	-2.3	-2.3	-2.4	-2.4	-2.0	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-2.0	-2.0	-2.1	-1.6	-1.7	-1.8	-1.8	-1.9
	10	-2.8	-3.0	-3.1	-3.2	-3.3	-2.7	-2.9	-3.0	-3.0	-3.1	-2.5	-2.7	-2.8	-2.9	-3.0	-2.4	-2.6	-2.6	-2.7	-2.8	-2.2	-2.4	-2.5	-2.5	-2.6
1	-35	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.9	3.0	2.5	2.9	3.0	3.2	3.3	2.7	3.1	3.3	3.4	3.6	2.9	3.4	3.5	3.7	3.9
3	-30	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.6	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.4	2.8	3.2	3.3	3.5	3.7
0	-25	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.2	2.3	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.7	2.8	2.3	2.7	2.8	3.0	3.1
0	-20	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.4	2.5
0	-15	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.9	0.8	1.0	1.0	1.1	1.2	1.0	1.2	1.3	1.3	1.4
	-10	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3
	-5	-1.4	-1.5	-1.5	-1.5	-1.5	-1.3	-1.3	-1.3	-1.3	-1.4	-1.1	-1.1	-1.1	-1.2	-1.2	-0.9	-0.9	-0.9	-1.0	-1.0	-0.8	-0.7	-0.7	-0.7	-0.7
	0	-2.0	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.1	-2.1	-2.2	-1.7	-1.8	-1.9	-1.9	-2.0	-1.6	-1.7	-1.7	-1.7	-1.8	-1.4	-1.5	-1.5	-1.5	-1.6
	5	-2.6	-2.8	-2.8	-2.9	-3.0	-2.5	-2.6	-2.7	-2.8	-2.8	-2.3	-2.5	-2.5	-2.6	-2.7	-2.2	-2.3	-2.4	-2.4	-2.5	-2.0	-2.1	-2.2	-2.2	-2.3
	10	-3.1	-3.4	-3.4	-3.5	-3.7	-3.0	-3.2	-3.3	-3.4	-3.5	-2.9	-3.1	-3.2	-3.3	-3.4	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.9	-2.9	-3.0
1	-35	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.5	2.0	2.4	2.5	2.6	2.8	2.3	2.6	2.7	2.9	3.0	2.5	2.9	3.0	3.2	3.3
4	-30	1.4	1.6	1.7	1.8	1.9	1.6	1.8	1.9	2.0	2.2	1.8	2.1	2.2	2.3	2.4	2.0	2.3	2.4	2.6	2.7	2.2	2.6	2.7	2.8	3.0
0	-25	1.0	1.2	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.3	2.4	2.5
0	-20	0.5	0.7	0.7	0.8	0.9	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.1	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8
0	-15	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.5	0.7	0.7	0.8	0.8
	-10	-1.0	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3
	-5	-1.8	-1.9	-1.9	-1.9	-2.0	-1.6	-1.7	-1.7	-1.8	-1.8	-1.5	-1.5	-1.6	-1.6	-1.6	-1.3	-1.4	-1.4	-1.4	-1.4	-1.1	-1.2	-1.2	-1.2	-1.2
	0	-2.4	-2.5	-2.6	-2.7	-2.7	-2.2	-2.4	-2.4	-2.5	-2.6	-2.1	-2.2	-2.3	-2.3	-2.4	-1.9	-2.1	-2.1	-2.2	-2.2	-1.8	-1.9	-1.9	-2.0	-2.0
	5	-2.9	-3.1	-3.2	-3.3	-3.4	-2.8	-3.0	-3.1	-3.2	-3.3	-2.7	-2.9	-2.9	-3.0	-3.1	-2.5	-2.7	-2.8	-2.8	-2.9	-2.4	-2.5	-2.6	-2.7	-2.7
	10	-3.4	-3.7	-3.8	-3.9	-4.0	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.0	-3.3	-3.4	-3.5	-3.6	-2.9	-3.1	-3.2	-3.3	-3.4
1	-35	0.7	0.9	0.9	1.0	1.1	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0
6	-30	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.9	0.8	0.9	1.0	1.1	1.1	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.5	1.6	1.6
0	-25	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.6	0.6	0.7	0.7	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.2	1.2
0	-20	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6
0	-15	-1.1	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3
	-10	-1.8	-1.9	-2.0	-2.0	-2.0	-1.7	-1.8	-1.8	-1.8	-1.9	-1.5	-1.6	-1.6	-1.7	-1.7	-1.4	-1.4	-1.4	-1.5	-1.5	-1.2	-1.2	-1.3	-1.3	-1.3
	-5	-2.5	-2.6	-2.7	-2.8	-2.9	-2.4	-2.5	-2.6	-2.6	-2.7	-2.2	-2.4	-2.4	-2.5	-2.5	-2.1	-2.2	-2.2	-2.3	-2.3	-1.9	-2.0	-2.1	-2.1	-2.2
	0	-3.0	-3.3	-3.3	-3.4	-3.5	-2.9	-3.1	-3.2	-3.3	-3.4	-2.8	-3.0	-3.1	-3.1	-3.2	-2.6	-2.8	-2.9	-3.0	-3.1	-2.5	-2.7	-2.7	-2.8	-2.9
	5	-3.6	-3.8	-3.9	-4.0	-4.2	-3.5	-3.7	-3.8	-3.9	-4.0	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7	-3.1	-3.3	-3.4	-3.5	-3.6
	10	-4.0	-4.3	-4.4	-4.6	-4.7	-3.9	-4.2	-4.3	-4.5	-4.6	-3.8	-4.1	-4.2	-4.3	-4.5	-3.7	-4.0	-4.1	-4.2	-4.3	-3.5	-3.8	-3.9	-4.0	-4.2
1	-35	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.8
8	-30	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5
0	-25	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.1
0	-20	-1.2	-1.2	-1.2	-1.3	-1.3	-1.0	-1.1	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-0.7	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5
0	-15	-1.9	-2.0	-2.0	-2.0	-2.1	-1.7	-1.8	-1.8	-1.9	-1.9	-1.6	-1.6	-1.7	-1.7	-1.7	-1.4	-1.5	-1.5	-1.5	-1.5	-1.2	-1.3	-1.3	-1.3	-1.3
	-10	-2.5	-2.7	-2.8	-2.8	-2.9	-2.4	-2.6	-2.6	-2.7	-2.8	-2.3	-2.4	-2.5	-2.5	-2.6	-2.1	-2.3	-2.3	-2.4	-2.4	-2.0	-2.1	-2.1	-2.2	-2.2
	-5	-3.1	-3.4	-3.4	-3.5	-3.6	-3.0	-3.2	-3.3	-3.4	-3.5	-2.9	-3.1	-3.2	-3.2	-3.3	-2.7	-2.9	-3.0	-3.1	-3.2	-2.6	-2.8	-2.8	-2.9	-3.0
	0	-3.7	-4.0	-4.1	-4.2	-4.3	-3.6	-3.9	-4.0	-4.1	-4.2	-3.5	-3.7	-3.8	-3.9	-4.0	-3.3	-3.6	-3.7	-3.8	-3.9	-3.2	-3.4	-3.5	-3.6	-3.7
	5	-4.2	-4.5	-4.6	-4.8	-4.9	-4.1	-4.4	-4.5	-4.7	-4.8	-4.0	-4.3	-4.4	-4.5	-4.7	-3.9	-4.2	-4.3	-4.4	-4.5	-3.7	-4.0	-4.1	-4.2	-4.4
	10	-4.7	-5.1	-5.2	-5.3	-5.5	-4.6	-5.0	-5.1	-5.2	-5.4	-4.5	-4.8	-5.0	-5.1	-5.3	-4.4	-4.7	-4.9	-5.0	-5.1	-4.3	-4.6	-4.7	-4.9	-5.0

525AFM-05-00

Figure 4-41 (Sheet 5)

SECOND SEGMENT TAKEOFF NET CLIMB GRADIENT - PERCENT

FLAPS - 15°

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - V2
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - TAKEOFF THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		11400					11000					10500					9500					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
1	-35	3.7	4.2	4.4	4.6	4.9	4.2	4.8	5.1	5.3	5.6	4.9	5.7	5.9	6.2	6.6	6.6	7.6	7.9	8.3	8.8	8.8	10.0	10.5	11.1	11.7
2	-30	3.5	4.0	4.2	4.4	4.7	4.0	4.6	4.8	5.1	5.4	4.8	5.4	5.7	6.0	6.3	6.4	7.3	7.7	8.1	8.5	8.5	9.7	10.2	10.7	11.3
0	-25	3.1	3.5	3.7	3.9	4.1	3.6	4.1	4.3	4.5	4.8	4.3	4.9	5.1	5.4	5.7	5.9	6.7	7.0	7.4	7.8	7.8	9.0	9.4	9.9	10.5
0	-20	2.5	2.9	3.1	3.2	3.4	3.0	3.5	3.6	3.8	4.0	3.7	4.2	4.4	4.7	4.9	5.2	6.0	6.3	6.6	6.9	7.1	8.1	8.5	9.0	9.4
0	-15	1.7	1.9	2.1	2.2	2.3	2.1	2.5	2.6	2.7	2.9	2.8	3.2	3.3	3.5	3.7	4.2	4.8	5.0	5.3	5.6	5.9	6.8	7.1	7.5	7.9
	-10	0.7	0.9	1.0	1.0	1.1	1.1	1.4	1.5	1.6	1.7	1.7	2.0	2.1	2.3	2.4	3.0	3.5	3.7	3.9	4.1	4.6	5.3	5.6	5.9	6.3
	-5	-0.1	-0.1	0.0	0.0	0.0	0.3	0.4	0.4	0.5	0.5	0.8	1.0	1.1	1.1	1.2	2.0	2.3	2.5	2.6	2.8	3.5	4.0	4.2	4.5	4.7
	0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.5	-0.5	-0.4	-0.4	-0.4	0.0	0.1	0.1	0.2	0.2	1.1	1.4	1.5	1.6	1.7	2.5	2.9	3.1	3.3	3.5
	5	-1.5	-1.6	-1.6	-1.6	-1.7	-1.1	-1.2	-1.2	-1.2	-1.2	-0.7	-0.7	-0.6	-0.6	-0.6	0.4	0.5	0.6	0.6	0.7	1.7	2.0	2.1	2.2	2.4
	10	-2.1	-2.2	-2.3	-2.3	-2.4	-1.8	-1.9	-1.9	-2.0	-2.0	-1.3	-1.4	-1.4	-1.4	-1.5	-0.3	-0.3	-0.3	-0.2	-0.2	0.9	1.1	1.2	1.3	1.3
1	-35	3.2	3.7	3.8	4.0	4.2	3.7	4.2	4.5	4.7	4.9	4.4	5.0	5.3	5.6	5.8	6.0	6.9	7.2	7.6	8.0	8.1	9.2	9.7	10.2	10.7
3	-30	3.0	3.4	3.6	3.8	4.0	3.5	4.0	4.2	4.4	4.7	4.2	4.8	5.0	5.3	5.6	5.8	6.6	7.0	7.3	7.7	7.8	8.9	9.3	9.8	10.4
0	-25	2.6	2.9	3.1	3.2	3.4	3.0	3.5	3.7	3.9	4.1	3.7	4.3	4.5	4.7	4.9	5.3	6.0	6.3	6.6	7.0	7.1	8.2	8.6	9.0	9.5
0	-20	2.0	2.4	2.5	2.6	2.8	2.5	2.9	3.1	3.2	3.4	3.2	3.6	3.8	4.0	4.2	4.7	5.3	5.6	5.9	6.2	6.5	7.4	7.8	8.2	8.6
0	-15	1.2	1.4	1.5	1.6	1.7	1.6	1.9	2.0	2.1	2.3	2.2	2.6	2.7	2.9	3.0	3.6	4.2	4.4	4.6	4.9	5.3	6.1	6.4	6.7	7.1
	-10	0.3	0.4	0.4	0.5	0.5	0.7	0.8	0.9	1.0	1.0	1.2	1.5	1.6	1.7	1.8	2.5	2.9	3.1	3.2	3.4	4.0	4.7	4.9	5.2	5.5
	-5	-0.6	-0.5	-0.5	-0.5	-0.5	-0.2	-0.1	-0.1	-0.1	0.0	0.3	0.4	0.5	0.6	0.6	1.5	1.8	1.9	2.0	2.1	2.9	3.4	3.6	3.8	4.0
	0	-1.3	-1.3	-1.3	-1.3	-1.4	-0.9	-0.9	-0.9	-0.9	-0.9	-0.4	-0.4	-0.4	-0.3	-0.3	0.7	0.9	0.9	1.0	1.1	2.0	2.3	2.5	2.6	2.8
	5	-1.9	-2.0	-2.0	-2.1	-2.1	-1.5	-1.6	-1.6	-1.7	-1.7	-1.1	-1.1	-1.1	-1.1	-1.1	0.0	0.0	0.1	0.1	0.2	1.2	1.4	1.5	1.6	1.8
	10	-2.4	-2.6	-2.7	-2.8	-2.8	-2.1	-2.3	-2.3	-2.4	-2.5	-1.7	-1.8	-1.8	-1.9	-1.9	-0.7	-0.7	-0.7	-0.7	-0.7	0.4	0.6	0.6	0.7	0.8
1	-35	2.7	3.1	3.3	3.5	3.6	3.2	3.7	3.9	4.1	4.3	3.9	4.5	4.7	4.9	5.2	5.5	6.3	6.6	6.9	7.3	7.4	8.4	8.9	9.3	9.8
4	-30	2.5	2.8	3.0	3.1	3.3	3.0	3.4	3.5	3.7	3.9	3.6	4.1	4.3	4.6	4.8	5.2	5.9	6.2	6.5	6.8	7.0	8.0	8.4	8.9	9.4
0	-25	2.1	2.4	2.5	2.7	2.8	2.6	2.9	3.1	3.2	3.4	3.2	3.7	3.9	4.0	4.3	4.7	5.4	5.6	5.9	6.2	6.5	7.4	7.8	8.2	8.7
0	-20	1.5	1.8	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.7	2.6	3.0	3.1	3.3	3.5	4.0	4.6	4.9	5.1	5.4	5.8	6.6	6.9	7.3	7.7
0	-15	0.7	0.9	0.9	1.0	1.1	1.1	1.4	1.4	1.5	1.6	1.7	2.0	2.1	2.2	2.4	3.1	3.5	3.7	3.9	4.1	4.7	5.3	5.6	5.9	6.2
	-10	-0.2	-0.1	-0.1	-0.1	0.0	0.2	0.3	0.4	0.4	0.5	0.8	0.9	1.0	1.1	1.1	2.0	2.3	2.4	2.6	2.7	3.5	4.0	4.2	4.4	4.7
	-5	-1.0	-1.0	-1.0	-1.0	-1.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.1	0.0	0.0	0.0	0.1	1.0	1.3	1.3	1.4	1.5	2.4	2.8	2.9	3.1	3.3
	0	-1.6	-1.7	-1.7	-1.8	-1.8	-1.3	-1.3	-1.4	-1.4	-1.4	-0.8	-0.8	-0.8	-0.8	-0.8	0.2	0.4	0.4	0.5	0.5	1.5	1.8	1.9	2.0	2.2
	5	-2.2	-2.4	-2.4	-2.5	-2.6	-1.9	-2.0	-2.1	-2.1	-2.2	-1.5	-1.5	-1.6	-1.6	-1.6	-0.5	-0.4	-0.4	-0.4	-0.4	0.7	0.9	1.0	1.1	1.1
	10	-2.8	-3.0	-3.1	-3.1	-3.2	-2.5	-2.6	-2.7	-2.8	-2.9	-2.1	-2.2	-2.2	-2.3	-2.4	-1.1	-1.2	-1.2	-1.2	-1.2	0.0	0.1	0.1	0.2	0.2
1	-35	1.7	2.0	2.1	2.2	2.3	2.2	2.5	2.6	2.8	2.9	2.8	3.2	3.4	3.5	3.7	4.2	4.8	5.1	5.3	5.6	6.0	6.9	7.2	7.6	8.0
6	-30	1.4	1.6	1.7	1.8	1.9	1.8	2.1	2.2	2.4	2.5	2.4	2.8	3.0	3.1	3.3	3.9	4.4	4.6	4.9	5.1	5.6	6.4	6.7	7.0	7.4
0	-25	1.0	1.2	1.3	1.4	1.5	1.5	1.7	1.8	1.9	2.0	2.1	2.4	2.5	2.7	2.8	3.5	4.0	4.2	4.4	4.6	5.1	5.9	6.2	6.5	6.8
0	-20	0.6	0.7	0.8	0.8	0.9	1.0	1.2	1.2	1.3	1.4	1.5	1.8	1.9	2.0	2.1	2.9	3.3	3.5	3.6	3.8	4.5	5.1	5.4	5.7	6.0
0	-15	-0.2	-0.1	-0.1	-0.1	-0.1	0.2	0.3	0.3	0.4	0.4	0.7	0.9	1.0	1.0	1.1	2.0	2.3	2.4	2.5	2.7	3.5	4.0	4.2	4.4	4.6
	-10	-1.0	-1.1	-1.1	-1.1	-1.1	-0.7	-0.6	-0.6	-0.6	-0.6	-0.2	-0.1	-0.1	0.0	0.0	1.0	1.2	1.2	1.3	1.4	2.3	2.7	2.9	3.0	3.2
	-5	-1.7	-1.8	-1.9	-1.9	-2.0	-1.4	-1.5	-1.5	-1.5	-1.6	-0.9	-1.0	-1.0	-1.0	-1.0	0.1	0.2	0.3	0.3	0.3	1.4	1.7	1.8	1.9	2.0
	0	-2.4	-2.5	-2.6	-2.6	-2.7	-2.0	-2.2	-2.2	-2.3	-2.3	-1.6	-1.7	-1.7	-1.8	-1.8	-0.6	-0.6	-0.6	-0.6	-0.6	0.6	0.7	0.8	0.9	0.9
	5	-2.9	-3.1	-3.2	-3.3	-3.4	-2.6	-2.8	-2.9	-3.0	-3.0	-2.2	-2.4	-2.4	-2.5	-2.6	-1.3	-1.4	-1.4	-1.4	-1.4	-0.2	-0.1	-0.1	-0.1	0.0
	10	-3.4	-3.7	-3.8	-3.9	-4.0	-3.1	-3.4	-3.5	-3.6	-3.7	-2.8	-3.0	-3.1	-3.1	-3.2	-1.9	-2.0	-2.1	-2.1	-2.2	-0.9	-0.9	-0.9	-0.9	-0.9
1	-35	0.7	0.8	0.9	1.0	1.0	1.1	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.2	2.3	3.0	3.4	3.6	3.8	4.0	4.6	5.3	5.6	5.8	6.1
8	-30	0.4	0.6	0.6	0.7	0.7	0.9	1.0	1.1	1.2	1.2	1.4	1.7	1.7	1.8	2.0	2.7	3.1	3.3	3.4	3.6	4.3	4.9	5.2	5.4	5.7
0	-25	0.1	0.2	0.2	0.3	0.3	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.3	1.4	1.5	2.3	2.7	2.8	2.9	3.1	3.9	4.4	4.6	4.9	5.1
0	-20	-0.4	-0.3	-0.3	-0.3	-0.2	0.0	0.1	0.2	0.2	0.2	0.6	0.7	0.8	0.8	0.9	1.8	2.1	2.2	2.3	2.4	3.3	3.8	3.9	4.1	4.4
0	-15	-1.1	-1.1	-1.1	-1.1	-1.1	-0.7	-0.7	-0.7	-0.7	-0.7	-0.2	-0.1	-0.1	-0.1	-0.1	0.9	1.1	1.2	1.3	1.4	2.3	2.7	2.8	3.0	3.1
	-10	-1.8	-1.9	-2.0	-2.0	-2.0	-1.5	-1.5	-1.6	-1.6	-1.6	-1.0	-1.0	-1.1	-1.1	-1.1	0.0	0.1	0.2	0.2	0.2	1.3	1.6	1.6	1.8	1.9
	-5	-2.5	-2.6	-2.7	-2.7	-2.8	-2.1	-2.3	-2.3	-2.4	-2.4	-1.7	-1.8	-1.8	-1.9	-1.9	-0.7	-0.7	-0.7	-0.7	-0.7	0.5	0.6	0.7	0.7	0.8
	0	-3.1	-3.3	-3.4	-3.5	-3.6	-2.8	-3.0	-3.1	-3.1	-3.2	-2.4	-2.6	-2.6	-2.7	-2.8	-1.5	-1.6	-1.6	-1.6	-1.7	-0.4	-0.3	-0.3	-0.3	-0.3
	5	-3.6	-3.9	-4.0	-4.1	-4.2	-3.3	-3.6	-3.7	-3.8	-3.9	-3.0	-3.2	-3.3	-3.4	-3.5	-2.1	-2.3	-2.3	-2.4	-2.5	-1.1	-1.1	-1.2	-1.2	-1.2
	10	-4.2	-4.5	-4.6	-4.7	-4.9	-3.9	-4.2	-4.3	-4.4	-4.6	-3.6	-3.8	-3.9	-4.1	-4.2	-2.8	-3.0	-3.1	-3.2	-3.3	-1.8	-1.9	-2.0	-2.0	-2.1

525AFM-06-00

Figure 4-41 (Sheet 6)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11500					11000				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
		VENR=138 KIAS					VENR=137 KIAS					VENR=135 KIAS					VENR=133 KIAS					VENR=131 KIAS				
0	-20	5.9	6.7	7.0	7.4	7.7	6.1	7.0	7.3	7.6	8.0	6.4	7.3	7.6	8.0	8.4	7.1	8.0	8.4	8.9	9.3	7.8	8.9	9.3	9.8	10.3
	-15	5.9	6.7	7.0	7.4	7.7	6.1	7.0	7.3	7.7	8.0	6.4	7.3	7.6	8.0	8.4	7.1	8.1	8.4	8.9	9.3	7.8	8.9	9.3	9.8	10.3
	-10	6.0	6.8	7.1	7.4	7.8	6.2	7.0	7.3	7.7	8.1	6.4	7.3	7.6	8.0	8.4	7.1	8.1	8.5	8.9	9.3	7.9	8.9	9.4	9.8	10.3
	-5	6.0	6.8	7.1	7.4	7.8	6.2	7.0	7.3	7.7	8.1	6.5	7.3	7.7	8.0	8.4	7.1	8.1	8.5	8.9	9.3	7.9	9.0	9.4	9.8	10.3
	0	6.0	6.8	7.1	7.4	7.8	6.2	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.0	8.4	7.2	8.1	8.5	8.9	9.4	7.9	9.0	9.4	9.9	10.4
	5	6.0	6.8	7.1	7.5	7.8	6.3	7.1	7.4	7.7	8.1	6.5	7.4	7.7	8.1	8.5	7.2	8.2	8.5	9.0	9.4	8.0	9.0	9.5	9.9	10.4
	10	6.1	6.9	7.2	7.5	7.8	6.3	7.1	7.4	7.8	8.1	6.6	7.4	7.7	8.1	8.5	7.3	8.2	8.6	9.0	9.4	8.0	9.1	9.5	9.9	10.4
	15	5.4	6.1	6.4	6.7	7.0	5.6	6.4	6.7	7.0	7.3	5.9	6.7	7.0	7.3	7.6	6.6	7.5	7.8	8.2	8.5	7.3	8.3	8.7	9.1	9.5
	20	4.5	5.1	5.4	5.6	5.9	4.7	5.4	5.6	5.9	6.1	5.0	5.6	5.9	6.2	6.5	5.6	6.4	6.7	7.0	7.3	6.3	7.2	7.5	7.8	8.2
	25	3.7	4.2	4.4	4.6	4.9	3.9	4.4	4.6	4.9	5.1	4.1	4.7	4.9	5.2	5.4	4.7	5.4	5.6	5.9	6.2	5.4	6.1	6.4	6.7	7.0
	30	3.0	3.4	3.6	3.8	3.9	3.2	3.6	3.8	4.0	4.2	3.4	3.9	4.0	4.2	4.5	4.0	4.5	4.7	5.0	5.2	4.6	5.2	5.5	5.7	6.0
	35	2.2	2.6	2.7	2.9	3.0	2.4	2.8	2.9	3.1	3.3	2.6	3.0	3.2	3.3	3.5	3.2	3.6	3.8	4.0	4.2	3.8	4.3	4.5	4.7	5.0
	40	1.6	1.9	2.0	2.2	2.3	1.8	2.1	2.2	2.4	2.5	2.0	2.3	2.5	2.6	2.7	2.5	2.9	3.1	3.2	3.4	3.1	3.5	3.7	3.9	4.1
	45	1.0	1.3	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	2.0	1.9	2.2	2.3	2.4	2.6	2.4	2.8	2.9	3.1	3.2
	50	0.5	0.6	0.7	0.8	0.8	0.6	0.8	0.9	0.9	1.0	0.8	1.0	1.1	1.1	1.2	1.2	1.5	1.6	1.7	1.8	1.7	2.1	2.2	2.3	2.4
	55	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.7	0.9	1.0	1.0	1.1	1.2	1.4	1.5	1.6	1.7
		VENR=138 KIAS					VENR=137 KIAS					VENR=136 KIAS					VENR=133 KIAS					VENR=130 KIAS				
5	-30	5.4	6.1	6.4	6.7	7.0	5.6	6.4	6.6	6.9	7.3	5.9	6.6	6.9	7.3	7.6	6.5	7.4	7.7	8.1	8.5	7.3	8.2	8.6	9.0	9.4
0	-25	5.4	6.0	6.3	6.6	6.9	5.6	6.3	6.6	6.9	7.2	5.8	6.6	6.9	7.2	7.5	6.5	7.3	7.6	8.0	8.4	7.2	8.1	8.5	8.9	9.3
0	-20	5.3	6.0	6.2	6.5	6.8	5.5	6.2	6.5	6.8	7.1	5.8	6.5	6.8	7.1	7.4	6.4	7.2	7.6	7.9	8.3	7.1	8.1	8.4	8.8	9.2
0	-15	5.3	5.9	6.2	6.4	6.7	5.5	6.2	6.4	6.7	7.0	5.7	6.4	6.7	7.0	7.3	6.4	7.2	7.5	7.8	8.2	7.1	8.0	8.3	8.7	9.1
	-10	5.2	5.8	6.1	6.4	6.6	5.4	6.1	6.3	6.6	6.9	5.7	6.4	6.6	6.9	7.2	6.3	7.1	7.4	7.7	8.1	7.0	7.9	8.3	8.6	9.0
	-5	5.1	5.8	6.0	6.3	6.6	5.3	6.0	6.3	6.5	6.8	5.6	6.3	6.6	6.8	7.1	6.2	7.0	7.3	7.6	8.0	7.0	7.8	8.2	8.5	8.9
	0	5.0	5.6	5.8	6.1	6.3	5.2	5.8	6.1	6.3	6.6	5.4	6.1	6.3	6.6	6.9	6.1	6.8	7.1	7.4	7.8	6.8	7.6	8.0	8.3	8.7
	5	4.4	5.0	5.2	5.4	5.7	4.6	5.2	5.4	5.7	5.9	4.9	5.5	5.7	6.0	6.2	5.5	6.2	6.5	6.8	7.1	6.2	7.0	7.3	7.6	8.0
	10	3.6	4.1	4.3	4.5	4.7	3.8	4.3	4.5	4.7	4.9	4.1	4.6	4.8	5.0	5.2	4.7	5.3	5.5	5.7	6.0	5.3	6.0	6.3	6.5	6.8
	15	2.8	3.2	3.4	3.5	3.7	3.0	3.4	3.6	3.8	3.9	3.2	3.7	3.8	4.0	4.2	3.8	4.3	4.5	4.7	4.9	4.4	5.0	5.2	5.5	5.7
	20	2.1	2.5	2.6	2.7	2.8	2.3	2.6	2.8	2.9	3.1	2.5	2.9	3.0	3.2	3.3	3.1	3.5	3.6	3.8	4.0	3.6	4.1	4.3	4.5	4.7
	25	1.4	1.7	1.8	1.9	2.0	1.6	1.9	2.0	2.1	2.2	1.8	2.1	2.2	2.3	2.4	2.3	2.6	2.8	2.9	3.1	2.8	3.3	3.4	3.6	3.8
	30	0.8	1.0	1.1	1.2	1.3	1.0	1.2	1.3	1.4	1.4	1.2	1.4	1.5	1.6	1.7	1.7	1.9	2.0	2.1	2.3	2.2	2.5	2.6	2.8	2.9
	35	0.2	0.4	0.4	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.6	0.7	0.8	0.9	0.9	1.0	1.2	1.3	1.4	1.5	1.5	1.8	1.9	2.0	2.1
	40	-0.3	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.6	0.7	0.7	0.9	1.1	1.2	1.2	1.3
	44	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.6	0.7	0.7
		VENR=139 KIAS					VENR=138 KIAS					VENR=137 KIAS					VENR=134 KIAS					VENR=130 KIAS				
1	-40	4.7	5.3	5.5	5.8	6.0	4.9	5.5	5.8	6.0	6.3	5.2	5.8	6.1	6.3	6.6	5.8	6.5	6.8	7.1	7.4	6.5	7.3	7.6	7.9	8.3
0	-35	4.6	5.2	5.4	5.6	5.9	4.8	5.4	5.6	5.9	6.1	5.1	5.7	5.9	6.2	6.4	5.7	6.4	6.7	6.9	7.2	6.4	7.2	7.5	7.8	8.1
0	-30	4.5	5.1	5.3	5.5	5.7	4.7	5.3	5.5	5.7	6.0	5.0	5.6	5.8	6.0	6.3	5.6	6.3	6.5	6.8	7.1	6.3	7.0	7.3	7.6	8.0
0	-25	4.4	5.0	5.2	5.4	5.6	4.6	5.2	5.4	5.6	5.8	4.9	5.4	5.7	5.9	6.1	5.5	6.1	6.4	6.6	6.9	6.1	6.9	7.2	7.5	7.8
0	-20	4.1	4.6	4.8	5.0	5.2	4.3	4.8	5.0	5.2	5.4	4.5	5.1	5.3	5.5	5.7	5.1	5.8	6.0	6.2	6.5	5.8	6.5	6.8	7.1	7.4
	-15	3.8	4.2	4.4	4.6	4.8	4.0	4.4	4.6	4.8	5.0	4.2	4.7	4.9	5.1	5.3	4.8	5.4	5.6	5.8	6.1	5.4	6.1	6.4	6.6	6.9
	-10	3.3	3.7	3.9	4.0	4.2	3.5	3.9	4.1	4.3	4.4	3.7	4.2	4.3	4.5	4.7	4.3	4.8	5.0	5.2	5.5	4.9	5.5	5.8	6.0	6.3
	-5	2.9	3.2	3.4	3.5	3.7	3.0	3.4	3.6	3.7	3.9	3.3	3.7	3.8	4.0	4.2	3.8	4.3	4.5	4.7	4.9	4.4	5.0	5.2	5.4	5.6
	0	2.5	2.8	2.9	3.0	3.2	2.6	3.0	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.4	3.8	4.0	4.1	4.3	4.0	4.5	4.7	4.9	5.1
	5	2.0	2.3	2.4	2.5	2.6	2.2	2.5	2.6	2.7	2.8	2.4	2.7	2.8	2.9	3.1	2.9	3.3	3.4	3.6	3.7	3.5	3.9	4.1	4.3	4.5
	10	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.1	2.2	2.2	2.5	2.6	2.7	2.9	2.7	3.1	3.2	3.4	3.5
	15	0.6	0.8	0.8	0.9	1.0	0.8	1.0	1.0	1.1	1.2	1.0	1.1	1.2	1.3	1.4	1.4	1.7	1.8	1.9	2.0	1.9	2.2	2.3	2.5	2.6
	20	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.8	1.0	1.1	1.1	1.2	1.3	1.5	1.6	1.7	1.8
	25	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.2	0.3	0.4	0.4	0.5	0.7	0.8	0.9	1.0	1.0
	30	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.8	-0.7	-0.7	-0.7	-0.7	-0.4	-0.3	-0.3	-0.3	-0.2	0.1	0.2	0.2	0.2	0.3
	33	-1.4	-1.4	-1.4	-1.4	-1.4	-1.3	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-0.7	-0.7	-0.7	-0.7	-0.7	-0.3	-0.3	-0.2	-0.2	-0.2
		VENR=140 KIAS					VENR=139 KIAS					VENR=138 KIAS					VENR=135 KIAS					VENR=131 KIAS				
1	-50	3.0	3.4	3.5	3.7	3.9	3.2	3.6	3.7	3.9	4.1	3.4	3.8	4.0	4.2	4.3	4.0	4.4	4.6	4.8	5.0	4.6	5.1	5.3	5.6	5.8
5	-45	2.9	3.3	3.4	3.5	3.7	3.1	3.5	3.6	3.8	3.9	3.3	3.7	3.8	4.0	4.2	3.8	4.3	4.5	4.7	4.9	4.4	5.0	5.2	5.4	5.6
0	-40	2.8	3.2	3.3	3.4	3.6	3.0	3.4	3.5	3.6	3.8	3.2	3.6	3.7	3.9	4.1	3.7	4.2	4.4	4.5	4.7	4.3	4.9	5.0	5.3	5.5
0	-35	2.7	3.1	3.2	3.3	3.5	2.9	3.3	3.4	3.5	3.7	3.1	3.5	3.6	3.8	3.9	3.6	4.1	4.2	4.4	4.6	4.2	4.7	4.9	5.1	5.3
0	-30	2.4	2.7	2.8	2.9	3.1	2.6	2.9	3.0	3.1	3.3	2.8	3.1	3.2	3.4	3.5	3.3	3.7	3.9	4.0	4.2	3.9	4.3	4.5	4.7	4.9
	-25	2.1	2.3	2.4	2.6	2.7	2.2	2.5	2.6	2.7	2.9	2.4	2.7	2.9	3.0	3.1	2.9	3.3	3.5	3.6	3.8	3.5	3.9	4.1	4.3	4.5
	-20	1.7	1.9	2.0	2.1	2.2	1.9	2.1	2.2	2.3	2.4	2.1	2.3	2.4	2.5	2.7	2.6	2.9	3.0	3.1	3.3	3.1	3.5	3.6	3.8	4.0
	-15	1.4	1.6	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	1.7	1.9	2.0	2.1	2.2	2.2	2.5	2.6	2.7	2.8	2.7	3.1	3.2	3.3	3.5
	-10	1.0	1.2	1.2	1.3	1.4	1.1	1.3	1.4	1.5	1.5	1.3	1.5	1.6	1.7	1.8	1.8	2.0	2.1	2.2	2.3	2.3	2.6	2.7	2.8	3.0
	-5	0.6	0.8	0.8	0.9	0.9	0.8	0.9	1.0	1.0	1.1	0.9	1.1	1.2	1.2	1.3	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.4	2.5
	0	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.8	0.8	1.0	1.1	1.2	1.3	1.3	1.4	1.7	1.8	1.8	1.9
	5	-0.2	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.5	0.7	0.7	0.8	0.8	1.0	1.2	1.2	1.3	1.4
	10	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.1	0.0	0.1	0.1	0.1	0.4	0.5	0.6	0.6	0.7
	15	-1.3	-1.3	-1.3	-1.3	-1.3	-1.2	-1.2	-1.2	-1.2	-1.2	-1.0	-1.0	-1.0	-1.0	-1.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.2	-0.1	-0.1	-0.1	-0.1
	20	-1.8	-1.8	-1.9	-1.9	-1.9	-1.7	-1.7	-1.7	-1.8	-1.8	-1.5	-1.6	-1.6	-1.6	-1.6	-1.2	-1.2	-1.2	-1.2	-1.2	-0.8	-0.8	-0.8	-0.8	-0.7
	23	-2.1	-2.1	-2.2	-2.2	-2.2	-1.9	-2.0	-2.0	-2.1	-2.1	-1.8	-1.9	-1.9	-1.9	-1.9	-1.5	-1.5	-1.5	-1.5	-1.5	-1.1	-1.1	-1.1	-1.1	-1.1

525AFM-06-00

Figure 4-42 (Sheet 1 of 6)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 10500 WIND KNOTS					10000 WIND KNOTS					9500 WIND KNOTS					9000 WIND KNOTS					8500 WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
		VENR=128 KIAS					VENR=125 KIAS					VENR=122 KIAS					VENR=118 KIAS					VENR=115 KIAS				
0	-20	8.6	9.8	10.3	10.8	11.4	9.5	10.9	11.4	12.0	12.6	10.5	12.0	12.6	13.3	14.0	11.5	13.3	14.0	14.7	15.5	12.8	14.7	15.5	16.3	17.3
	-15	8.6	9.9	10.3	10.8	11.4	9.5	10.9	11.4	12.0	12.6	10.5	12.0	12.6	13.3	14.0	11.6	13.3	14.0	14.7	15.5	12.8	14.7	15.5	16.3	17.3
	-10	8.7	9.9	10.3	10.9	11.4	9.6	10.9	11.4	12.0	12.6	10.5	12.0	12.6	13.3	14.0	11.6	13.3	14.0	14.7	15.5	12.8	14.8	15.5	16.3	17.3
	-5	8.7	9.9	10.4	10.9	11.4	9.6	10.9	11.4	12.0	12.6	10.6	12.1	12.7	13.3	14.0	11.6	13.3	14.0	14.7	15.6	12.9	14.8	15.5	16.4	17.3
	0	8.8	9.9	10.4	10.9	11.5	9.6	11.0	11.5	12.1	12.7	10.6	12.1	12.7	13.3	14.0	11.7	13.4	14.0	14.8	15.6	12.9	14.8	15.6	16.4	17.3
	5	8.8	10.0	10.4	10.9	11.5	9.7	11.0	11.5	12.1	12.7	10.7	12.2	12.7	13.4	14.1	11.8	13.4	14.1	14.8	15.6	13.0	14.9	15.6	16.4	17.3
	10	8.8	10.0	10.5	11.0	11.5	9.7	11.1	11.6	12.1	12.7	10.7	12.2	12.8	13.4	14.1	11.8	13.5	14.1	14.9	15.6	13.1	14.9	15.7	16.5	17.4
	15	8.1	9.2	9.6	10.1	10.6	9.0	10.2	10.7	11.2	11.8	10.0	11.4	11.9	12.5	13.1	11.1	12.6	13.2	13.9	14.6	12.3	14.0	14.7	15.5	16.3
	20	7.1	8.0	8.4	8.8	9.2	7.9	9.0	9.4	9.8	10.3	8.8	10.0	10.5	11.0	11.6	9.8	11.2	11.7	12.3	13.0	11.0	12.5	13.1	13.8	14.6
	25	6.1	6.9	7.3	7.6	8.0	6.9	7.8	8.2	8.6	9.0	7.7	8.8	9.2	9.7	10.2	8.7	9.9	10.4	10.9	11.5	9.8	11.2	11.7	12.3	13.0
	30	5.3	6.0	6.3	6.6	6.9	6.0	6.8	7.1	7.5	7.9	6.8	7.7	8.1	8.5	9.0	7.7	8.8	9.2	9.7	10.2	8.7	10.0	10.4	11.0	11.6
	35	4.4	5.0	5.3	5.5	5.8	5.1	5.8	6.1	6.4	6.7	5.9	6.7	7.0	7.4	7.7	6.7	7.7	8.0	8.4	8.9	7.7	8.8	9.2	9.7	10.2
	40	3.7	4.2	4.4	4.6	4.9	4.3	5.0	5.2	5.5	5.8	5.1	5.8	6.1	6.4	6.7	5.9	6.7	7.1	7.4	7.8	6.8	7.8	8.1	8.6	9.0
	45	3.0	3.4	3.6	3.8	4.0	3.6	4.1	4.3	4.6	4.8	4.3	4.9	5.1	5.4	5.7	5.0	5.8	6.1	6.4	6.7	5.9	6.8	7.1	7.5	7.9
	50	2.3	2.7	2.8	3.0	3.1	2.9	3.3	3.5	3.7	3.9	3.5	4.1	4.3	4.5	4.7	4.2	4.9	5.1	5.4	5.7	5.1	5.8	6.1	6.4	6.8
	55	1.7	2.0	2.1	2.2	2.4	2.2	2.6	2.8	2.9	3.1	2.9	3.3	3.5	3.7	3.9	3.5	4.1	4.3	4.5	4.8	4.3	5.0	5.2	5.5	5.8
		VENR=126 KIAS					VENR=124 KIAS					VENR=121 KIAS					VENR=119 KIAS					VENR=115 KIAS				
5	-30	8.1	9.1	9.6	10.0	10.5	8.9	10.1	10.6	11.1	11.7	9.9	11.3	11.8	12.4	13.0	11.0	12.5	13.1	13.8	14.5	12.2	13.9	14.6	15.3	16.1
0	-25	8.0	9.0	9.5	9.9	10.4	8.9	10.1	10.5	11.0	11.6	9.8	11.2	11.7	12.3	12.9	10.9	12.4	13.0	13.6	14.3	12.1	13.8	14.4	15.2	16.0
0	-20	7.9	9.0	9.4	9.8	10.3	8.8	10.0	10.4	10.9	11.5	9.8	11.1	11.6	12.2	12.8	10.8	12.3	12.9	13.5	14.2	12.0	13.7	14.3	15.0	15.8
0	-15	7.9	8.9	9.3	9.7	10.2	8.7	9.9	10.3	10.8	11.3	9.7	11.0	11.5	12.0	12.6	10.8	12.2	12.8	13.4	14.1	11.9	13.6	14.2	14.9	15.7
	-10	7.8	8.8	9.2	9.6	10.1	8.7	9.8	10.2	10.7	11.2	9.6	10.9	11.4	11.9	12.5	10.7	12.1	12.7	13.3	13.9	11.9	13.5	14.1	14.8	15.5
	-5	7.7	8.7	9.1	9.5	10.0	8.6	9.7	10.1	10.6	11.1	9.6	10.8	11.3	11.8	12.4	10.6	12.0	12.6	13.2	13.8	11.8	13.4	14.0	14.7	15.4
	0	7.6	8.5	8.9	9.3	9.7	8.4	9.5	9.9	10.4	10.9	9.4	10.6	11.1	11.6	12.2	10.4	11.8	12.3	12.9	13.6	11.6	13.1	13.8	14.4	15.1
	5	7.0	7.9	8.2	8.6	9.0	7.9	8.9	9.3	9.7	10.1	8.8	9.9	10.4	10.9	11.4	9.8	11.1	11.6	12.2	12.7	11.0	12.4	13.0	13.6	14.3
	10	6.0	6.8	7.1	7.5	7.8	6.8	7.7	8.1	8.4	8.8	7.7	8.7	9.1	9.6	10.0	8.7	9.8	10.3	10.8	11.3	9.8	11.1	11.6	12.1	12.7
	15	5.1	5.8	6.1	6.3	6.6	5.9	6.7	7.0	7.3	7.6	6.7	7.6	7.9	8.3	8.7	7.6	8.6	9.0	9.4	9.9	8.6	9.8	10.2	10.7	11.3
	20	4.3	4.9	5.1	5.3	5.6	5.0	5.7	5.9	6.2	6.5	5.8	6.6	6.9	7.2	7.5	6.6	7.5	7.9	8.2	8.6	7.6	8.6	9.0	9.4	9.9
	25	3.4	3.9	4.1	4.3	4.5	4.1	4.7	4.9	5.1	5.4	4.9	5.5	5.8	6.1	6.3	5.7	6.4	6.7	7.0	7.4	6.6	7.4	7.8	8.2	8.6
	30	2.7	3.2	3.3	3.5	3.7	3.4	3.9	4.0	4.2	4.5	4.1	4.7	4.9	5.1	5.4	4.8	5.5	5.8	6.0	6.3	5.7	6.5	6.8	7.1	7.5
	35	2.0	2.4	2.5	2.6	2.8	2.6	3.0	3.2	3.4	3.5	3.3	3.8	4.0	4.2	4.4	4.0	4.6	4.8	5.1	5.3	4.8	5.5	5.8	6.0	6.4
	40	1.4	1.6	1.7	1.9	2.0	2.0	2.3	2.4	2.5	2.7	2.6	3.0	3.1	3.3	3.5	3.3	3.7	3.9	4.1	4.3	4.0	4.6	4.8	5.1	5.3
	44	0.9	1.1	1.2	1.3	1.4	1.4	1.7	1.8	1.9	2.0	2.0	2.4	2.5	2.6	2.8	2.7	3.1	3.3	3.4	3.6	3.4	3.9	4.1	4.3	4.5
		VENR=127 KIAS					VENR=124 KIAS					VENR=120 KIAS					VENR=117 KIAS					VENR=115 KIAS				
1	-40	7.3	8.2	8.5	8.9	9.3	8.1	9.1	9.5	9.9	10.4	9.0	10.2	10.6	11.1	11.6	10.0	11.4	11.9	12.4	13.0	11.2	12.7	13.3	13.9	14.6
0	-35	7.1	8.0	8.4	8.7	9.1	7.9	9.0	9.3	9.8	10.2	8.9	10.0	10.4	10.9	11.4	9.9	11.2	11.7	12.2	12.8	11.0	12.5	13.1	13.7	14.3
0	-30	7.0	7.9	8.2	8.6	8.9	7.8	8.8	9.2	9.6	10.0	8.7	9.8	10.3	10.7	11.2	9.7	11.0	11.5	12.0	12.6	10.9	12.3	12.9	13.5	14.1
0	-25	6.9	7.7	8.1	8.4	8.8	7.7	8.7	9.0	9.4	9.8	8.6	9.7	10.1	10.6	11.0	9.6	10.8	11.3	11.8	12.4	10.7	12.1	12.7	13.3	13.9
0	-20	6.5	7.3	7.6	8.0	8.3	7.3	8.2	8.6	9.0	9.4	8.2	9.3	9.6	10.1	10.5	9.2	10.4	10.8	11.3	11.9	10.3	11.7	12.2	12.7	13.3
	-15	6.2	6.9	7.2	7.5	7.8	7.0	7.8	8.1	8.5	8.9	7.8	8.8	9.2	9.6	10.0	8.8	9.9	10.4	10.8	11.3	9.9	11.2	11.7	12.2	12.8
	-10	5.6	6.3	6.6	6.8	7.1	6.4	7.2	7.5	7.8	8.1	7.2	8.1	8.5	8.9	9.3	8.2	9.2	9.6	10.0	10.5	9.2	10.4	10.9	11.3	11.9
	-5	5.1	5.7	6.0	6.2	6.5	5.8	6.6	6.8	7.1	7.5	6.7	7.5	7.8	8.2	8.5	7.6	8.5	8.9	9.3	9.7	8.6	9.7	10.1	10.6	11.0
	0	4.6	5.2	5.4	5.6	5.9	5.3	6.0	6.3	6.5	6.8	6.1	6.9	7.2	7.5	7.8	7.0	7.9	8.2	8.6	9.0	8.0	9.0	9.4	9.8	10.3
	5	4.1	4.6	4.8	5.0	5.3	4.8	5.4	5.7	5.9	6.2	5.6	6.3	6.6	6.9	7.2	6.5	7.3	7.6	7.9	8.3	7.4	8.4	8.7	9.1	9.5
	10	3.3	3.8	3.9	4.1	4.3	4.0	4.5	4.7	4.9	5.1	4.7	5.3	5.6	5.8	6.1	5.5	6.2	6.5	6.8	7.1	6.4	7.3	7.6	7.9	8.3
	15	2.5	2.9	3.0	3.1	3.3	3.1	3.6	3.7	3.9	4.1	3.8	4.3	4.5	4.7	5.0	4.6	5.2	5.4	5.7	5.9	5.4	6.1	6.4	6.7	7.0
	20	1.8	2.1	2.2	2.3	2.5	2.4	2.8	2.9	3.0	3.2	3.1	3.5	3.7	3.8	4.0	3.8	4.3	4.5	4.7	4.9	4.6	5.2	5.4	5.7	6.0
	25	1.2	1.4	1.5	1.6	1.6	1.7	2.0	2.1	2.2	2.3	2.3	2.7	2.8	2.9	3.1	3.0	3.4	3.6	3.8	4.0	3.8	4.3	4.5	4.7	4.9
	30	0.5	0.7	0.7	0.8	0.9	1.0	1.3	1.3	1.4	1.5	1.6	1.9	2.0	2.1	2.2	2.3	2.6	2.7	2.9	3.0	3.0	3.4	3.6	3.7	3.9
	33	0.1	0.2	0.3	0.3	0.4	0.6	0.8	0.8	0.9	1.0	1.2	1.4	1.5	1.6	1.7	1.8	2.1	2.2	2.3	2.4	2.5	2.8	3.0	3.1	3.3
		VENR=128 KIAS					VENR=125 KIAS					VENR=121 KIAS					VENR=118 KIAS					VENR=115 KIAS				
1	-50	5.2	5.9	6.1	6.4	6.6	6.0	6.7	7.0	7.3	7.6	6.8	7.6	7.9	8.3	8.6	7.7	8.6	9.0	9.4	9.8	8.7	9.8	10.2	10.6	11.1
5	-45	5.1	5.7	5.9	6.2	6.5	5.8	6.5	6.8	7.1	7.4	6.6	7.4	7.7	8.1	8.4	7.5	8.4	8.8	9.2	9.6	8.5	9.6	10.0	10.4	10.9
0	-40	5.0	5.6	5.8	6.0	6.3	5.7	6.4	6.6	6.9	7.2	6.5	7.3	7.6	7.9	8.3	7.4	8.3	8.6	9.0	9.4	8.4	9.4	9.8	10.2	10.7
0	-35	4.9	5.5	5.7	5.9	6.2	5.6	6.3	6.5	6.8	7.1	6.4	7.1	7.4	7.8	8.1	7.3	8.1	8.5	8.8	9.2	8.2	9.3	9.6	10.1	10.5
0	-30	4.5	5.1	5.3	5.5	5.7	5.2	5.8	6.1	6.3	6.6	6.0	6.7	7.0	7.3	7.6	6.9	7.7	8.0	8.3	8.7	7.8	8.8	9.1	9.5	10.0
	-25	4.1	4.6	4.8	5.0	5.2	4.8	5.4	5.6	5.9	6.1	5.6	6.3	6.5	6.8	7.1	6.4	7.2	7.5	7.8	8.2	7.4	8.3	8.6	9.0	9.4
	-20	3.7	4.2	4.3	4.5	4.7	4.4	4.9	5.1	5.3	5.6	5.1	5.7	6.0	6.2	6.5	5.9	6.7	6.9	7.2	7.5	6.9	7.7	8.0	8.4	8.7
	-15	3.3	3.7	3.9	4.0	4.2	4.0	4.4	4.6	4.8	5.0	4.7	5.2	5.5	5.7	5.9	5.5	6.1	6.4	6.7	6.9	6.4	7.1	7.4	7.7	8.1
	-10	2.9	3.2	3.4	3.5	3.7	3.5	3.9	4.1	4.3	4.5	4.2	4.7	4.9	5.1	5.3	5.0	5.6	5.8	6.0	6.3	5.8	6.5	6.8	7.1	7.4
	-5	2.4	2.8	2.9	3.0	3.2	3.1	3.4	3.6	3.7	3.9	3.7	4.2	4.4	4.5	4.8	4.5	5.0	5.2	5.4	5.7	5.3	5.9	6.2	6.5	6.7
	0	2.0	2.2	2.4	2.5	2.6	2.6	2.9	3.0	3.2	3.3	3.2	3.6	3.8	3.9	4.1	3.9	4.4	4.6	4.8	5.0	4.7	5.3	5.5	5.8	6.0
	5	1.5	1.7	1.8	1.9	2.0	2.1	2.3	2.4	2.6	2.7	2.7	3.0	3.2	3.3	3.5	3.4	3.8	4.0	4.1	4.3	4.1	4.7	4.9	5.1	5.3
	10	0.9	1.0	1.1	1.2	1.2	1.4	1.6	1.7	1.8	1.9	2.0	2.3	2.4	2.5	2.6	2.6	3.0	3.1	3.3	3.4	3.4	3.8	4.0	4.2	4.3
	15	0.2	0.4	0.4	0.4	0.5	0.7	0.9	1.0	1.0	1.1	1.3	1.5	1.6	1.7	1.8	1.9	2.2	2.3	2.4	2.5	2.6	3.0	3.1	3.2	3.4
	20	-0.4	-0.3	-0.3	-0.3	-0.2	0.1	0.2	0.3	0.3	0.3	0.6	0.8	0.8	0.9	1.0	1.2	1.4	1.5	1.6	1.7	1.9	2.1	2.3	2.4	2.5
	23	-0.7	-0.6	-0.6	-0.6	-0.6	-0.2	-0.2	-0.1	-0.1	-0.1	0.3	0.4	0.4	0.5	0.6	0.8	1.0	1.1	1.2	1.2	1.5	1.7	1.8	1.9	2.0

525AFM-08-00

Figure 4-42 (Sheet 2)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																								
		12375					12200					12000					11500					11000				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
		VENR=144 KIAS					VENR=143 KIAS					VENR=141 KIAS					VENR=139 KIAS					VENR=133 KIAS				
2	-54	1.2	1.4	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.5	1.7	1.8	1.9	2.0	2.0	2.2	2.3	2.4	2.5	2.4	2.8	2.9	3.0	3.1
0	-50	1.1	1.3	1.4	1.4	1.5	1.3	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.7	2.8	2.9	3.0
0	-45	1.0	1.2	1.2	1.3	1.4	1.2	1.3	1.4	1.5	1.6	1.3	1.5	1.6	1.7	1.8	1.8	2.0	2.1	2.2	2.3	2.3	2.6	2.7	2.8	2.9
0	-40	0.8	0.9	1.0	1.0	1.1	0.9	1.1	1.1	1.2	1.3	1.1	1.3	1.3	1.4	1.5	1.5	1.7	1.8	1.9	2.0	2.0	2.3	2.4	2.5	2.6
0	-35	0.5	0.6	0.7	0.7	0.8	0.7	0.8	0.9	0.9	1.0	0.8	1.0	1.0	1.1	1.2	1.3	1.5	1.5	1.6	1.7	1.7	2.0	2.1	2.2	2.3
	-30	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.9	1.1	1.2	1.2	1.3	1.4	1.6	1.7	1.8	1.8
	-25	-0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.6	0.7	0.8	0.8	0.9	1.1	1.2	1.3	1.4	1.4
	-20	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.5	0.5	0.7	0.9	0.9	1.0	1.1
	-15	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.3	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.6	0.7
	-10	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.4	-0.3	-0.3	-0.3	-0.2	0.1	0.1	0.2	0.2	0.3
	-5	-1.3	-1.3	-1.3	-1.3	-1.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1	-1.1	-1.1	-1.1	-0.7	-0.7	-0.7	-0.6	-0.6	-0.3	-0.2	-0.2	-0.2	-0.2
	0	-1.8	-1.8	-1.8	-1.8	-1.9	-1.6	-1.7	-1.7	-1.7	-1.7	-1.5	-1.5	-1.6	-1.6	-1.6	-1.2	-1.2	-1.2	-1.2	-1.2	-0.8	-0.8	-0.8	-0.7	-0.7
	5	-2.2	-2.3	-2.3	-2.4	-2.4	-2.1	-2.2	-2.2	-2.2	-2.3	-2.0	-2.0	-2.1	-2.1	-2.1	-1.7	-1.7	-1.7	-1.7	-1.7	-1.3	-1.3	-1.3	-1.3	-1.3
	10	-2.7	-2.8	-2.8	-2.8	-2.9	-2.6	-2.7	-2.7	-2.7	-2.8	-2.4	-2.5	-2.6	-2.6	-2.6	-2.1	-2.2	-2.2	-2.3	-2.3	-1.8	-1.8	-1.9	-1.9	-1.9
	12	-2.8	-3.0	-3.0	-3.1	-3.1	-2.7	-2.9	-2.9	-3.0	-3.0	-2.6	-2.7	-2.8	-2.8	-2.9	-2.3	-2.4	-2.5	-2.5	-2.5	-2.0	-2.1	-2.1	-2.1	-2.1
		VENR=146 KIAS					VENR=145 KIAS					VENR=144 KIAS					VENR=141 KIAS					VENR=137 KIAS				
2	-54	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	0.1	0.2	0.2	0.2	0.3	0.5	0.6	0.6	0.7	0.7
5	-50	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.5	0.5
0	-45	-0.9	-0.9	-0.9	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6	-0.3	-0.3	-0.2	-0.2	-0.2	0.1	0.2	0.2	0.2	0.3
0	-40	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-0.8	-0.8	-0.5	-0.5	-0.5	-0.4	-0.4	-0.1	-0.1	0.0	0.0	0.0
0	-35	-1.4	-1.4	-1.4	-1.4	-1.4	-1.3	-1.3	-1.3	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1	-0.8	-0.8	-0.7	-0.7	-0.7	-0.4	-0.3	-0.3	-0.3	-0.3
	-30	-1.6	-1.7	-1.7	-1.7	-1.7	-1.5	-1.5	-1.6	-1.6	-1.6	-1.4	-1.4	-1.4	-1.4	-1.4	-1.1	-1.1	-1.0	-1.0	-1.0	-0.7	-0.7	-0.6	-0.6	-0.6
	-25	-1.9	-1.9	-1.9	-2.0	-2.0	-1.8	-1.8	-1.8	-1.8	-1.9	-1.6	-1.7	-1.7	-1.7	-1.7	-1.3	-1.3	-1.3	-1.3	-1.3	-1.0	-1.0	-0.9	-0.9	-0.9
	-20	-2.1	-2.2	-2.2	-2.2	-2.3	-2.0	-2.1	-2.1	-2.1	-2.1	-1.9	-1.9	-2.0	-2.0	-2.0	-1.6	-1.6	-1.6	-1.6	-1.7	-1.2	-1.2	-1.2	-1.3	-1.3
	-15	-2.4	-2.4	-2.5	-2.5	-2.5	-2.3	-2.3	-2.4	-2.4	-2.4	-2.1	-2.2	-2.2	-2.3	-2.3	-1.8	-1.9	-1.9	-1.9	-2.0	-1.5	-1.5	-1.6	-1.6	-1.6
	-10	-2.7	-2.8	-2.8	-2.9	-2.9	-2.6	-2.7	-2.7	-2.8	-2.8	-2.5	-2.6	-2.6	-2.7	-2.7	-2.2	-2.3	-2.3	-2.3	-2.4	-1.9	-1.9	-2.0	-2.0	-2.0
	-5	-3.1	-3.2	-3.2	-3.3	-3.3	-3.0	-3.1	-3.1	-3.2	-3.2	-2.9	-3.0	-3.0	-3.1	-3.1	-2.6	-2.7	-2.7	-2.8	-2.8	-2.3	-2.3	-2.4	-2.4	-2.4
	0	-3.4	-3.6	-3.6	-3.7	-3.7	-3.3	-3.5	-3.5	-3.6	-3.6	-3.2	-3.4	-3.4	-3.5	-3.5	-3.0	-3.1	-3.1	-3.2	-3.2	-2.7	-2.8	-2.8	-2.8	-2.9
	1	-3.5	-3.7	-3.8	-3.8	-3.9	-3.5	-3.6	-3.7	-3.7	-3.8	-3.4	-3.5	-3.6	-3.6	-3.7	-3.1	-3.2	-3.3	-3.3	-3.4	-2.8	-2.9	-3.0	-3.0	-3.1
		VENR=149 KIAS					VENR=149 KIAS					VENR=147 KIAS					VENR=143 KIAS					VENR=139 KIAS				
3	-54	-2.2	-2.3	-2.3	-2.4	-2.4	-2.1	-2.2	-2.2	-2.3	-2.3	-2.0	-2.1	-2.1	-2.1	-2.2	-1.7	-1.8	-1.8	-1.8	-1.8	-1.4	-1.4	-1.4	-1.5	-1.5
0	-50	-2.4	-2.4	-2.5	-2.5	-2.5	-2.3	-2.3	-2.4	-2.4	-2.4	-2.2	-2.2	-2.3	-2.3	-2.3	-1.9	-1.9	-1.9	-2.0	-2.0	-1.6	-1.6	-1.6	-1.6	-1.6
0	-45	-2.5	-2.6	-2.6	-2.7	-2.7	-2.4	-2.5	-2.5	-2.6	-2.6	-2.3	-2.4	-2.4	-2.5	-2.5	-2.1	-2.1	-2.1	-2.2	-2.2	-1.7	-1.8	-1.8	-1.8	-1.8
0	-40	-2.7	-2.8	-2.8	-2.9	-2.9	-2.6	-2.7	-2.7	-2.8	-2.8	-2.5	-2.6	-2.6	-2.7	-2.7	-2.2	-2.3	-2.3	-2.4	-2.4	-1.9	-2.0	-2.0	-2.0	-2.1
0	-35	-2.9	-3.0	-3.1	-3.1	-3.1	-2.8	-2.9	-3.0	-3.0	-3.0	-2.7	-2.8	-2.9	-2.9	-2.9	-2.5	-2.5	-2.6	-2.6	-2.6	-2.2	-2.2	-2.3	-2.3	-2.3
	-30	-3.1	-3.2	-3.3	-3.3	-3.4	-3.0	-3.1	-3.2	-3.2	-3.3	-2.9	-3.0	-3.1	-3.1	-3.2	-2.7	-2.8	-2.8	-2.8	-2.9	-2.4	-2.5	-2.5	-2.5	-2.6
	-25	-3.3	-3.4	-3.5	-3.5	-3.6	-3.2	-3.4	-3.4	-3.4	-3.5	-3.1	-3.3	-3.3	-3.3	-3.4	-2.9	-3.0	-3.0	-3.1	-3.1	-2.6	-2.7	-2.7	-2.8	-2.8
	-20	-3.5	-3.7	-3.7	-3.8	-3.8	-3.5	-3.6	-3.7	-3.7	-3.8	-3.4	-3.5	-3.6	-3.6	-3.7	-3.1	-3.3	-3.3	-3.4	-3.4	-2.9	-3.0	-3.0	-3.1	-3.1
	-15	-3.8	-3.9	-4.0	-4.1	-4.1	-3.7	-3.9	-3.9	-4.0	-4.0	-3.6	-3.8	-3.8	-3.9	-3.9	-3.4	-3.5	-3.6	-3.6	-3.7	-3.1	-3.3	-3.3	-3.3	-3.4
	-10	-4.1	-4.2	-4.3	-4.3	-4.4	-4.0	-4.1	-4.2	-4.3	-4.3	-3.9	-4.1	-4.1	-4.2	-4.2	-3.7	-3.8	-3.9	-3.9	-4.0	-3.4	-3.6	-3.6	-3.7	-3.7
	-9	-4.1	-4.3	-4.4	-4.4	-4.5	-4.1	-4.2	-4.3	-4.4	-4.4	-4.0	-4.1	-4.2	-4.3	-4.3	-3.7	-3.9	-4.0	-4.0	-4.1	-3.5	-3.6	-3.7	-3.8	-3.8
		VENR=154 KIAS					VENR=153 KIAS					VENR=152 KIAS					VENR=148 KIAS					VENR=143 KIAS				
3	-54	-3.5	-3.7	-3.7	-3.8	-3.8	-3.5	-3.6	-3.6	-3.7	-3.7	-3.4	-3.5	-3.6	-3.6	-3.7	-3.2	-3.3	-3.3	-3.4	-3.4	-2.9	-3.0	-3.1	-3.1	-3.2
5	-50	-3.6	-3.8	-3.8	-3.9	-3.9	-3.6	-3.7	-3.8	-3.8	-3.9	-3.5	-3.6	-3.7	-3.7	-3.8	-3.3	-3.4	-3.5	-3.5	-3.6	-3.1	-3.2	-3.2	-3.3	-3.3
0	-45	-3.8	-3.9	-4.0	-4.0	-4.1	-3.7	-3.9	-3.9	-4.0	-4.0	-3.6	-3.8	-3.8	-3.9	-3.9	-3.4	-3.6	-3.6	-3.7	-3.7	-3.2	-3.3	-3.4	-3.4	-3.5
0	-40	-3.9	-4.1	-4.1	-4.2	-4.3	-3.9	-4.0	-4.1	-4.1	-4.2	-3.8	-3.9	-4.0	-4.0	-4.1	-3.6	-3.7	-3.8	-3.8	-3.9	-3.4	-3.5	-3.6	-3.6	-3.7
0	-35	-4.1	-4.3	-4.3	-4.4	-4.4	-4.0	-4.2	-4.2	-4.3	-4.4	-4.0	-4.1	-4.2	-4.2	-4.3	-3.8	-3.9	-4.0	-4.0	-4.1	-3.6	-3.7	-3.7	-3.8	-3.8
	-30	-4.3	-4.4	-4.5	-4.5	-4.6	-4.2	-4.4	-4.4	-4.5	-4.5	-4.1	-4.3	-4.3	-4.4	-4.5	-3.9	-4.1	-4.2	-4.2	-4.3	-3.7	-3.9	-3.9	-4.0	-4.0
	-25	-4.4	-4.6	-4.7	-4.7	-4.8	-4.4	-4.5	-4.6	-4.7	-4.7	-4.3	-4.5	-4.5	-4.6	-4.7	-4.1	-4.3	-4.3	-4.4	-4.5	-3.9	-4.1	-4.1	-4.2	-4.2
	-20	-4.6	-4.8	-4.9	-4.9	-5.0	-4.6	-4.7	-4.8	-4.9	-4.9	-4.5	-4.7	-4.7	-4.8	-4.9	-4.3	-4.5	-4.5	-4.6	-4.7	-4.1	-4.3	-4.3	-4.4	-4.5

525AFM-06-00

Figure 4-42 (Sheet 3)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 10500 WIND KNOTS −10	0	10	20	30	10000 WIND KNOTS −10	0	10	20	30	9500 WIND KNOTS −10	0	10	20	30	9000 WIND KNOTS −10	0	10	20	30	8500 WIND KNOTS −10	0	10	20	30
		VENR=129 KIAS					VENR=127 KIAS					VENR=123 KIAS					VENR=119 KIAS					VENR=115 KIAS				
2	−54	3.0	3.4	3.5	3.7	3.8	3.6	4.0	4.2	4.4	4.6	4.3	4.8	5.0	5.2	5.4	5.0	5.6	5.9	6.1	6.4	5.9	6.6	6.9	7.1	7.5
0	−50	2.9	3.3	3.4	3.6	3.7	3.5	4.0	4.1	4.3	4.5	4.2	4.7	4.9	5.1	5.3	4.9	5.5	5.8	6.0	6.3	5.8	6.5	6.7	7.0	7.3
0	−45	2.8	3.2	3.3	3.4	3.6	3.4	3.8	4.0	4.1	4.3	4.1	4.6	4.8	5.0	5.2	4.8	5.4	5.6	5.9	6.1	5.7	6.3	6.6	6.9	7.2
0	−40	2.5	2.9	3.0	3.1	3.3	3.1	3.5	3.7	3.8	4.0	3.8	4.3	4.4	4.6	4.8	4.5	5.1	5.3	5.5	5.7	5.4	6.0	6.2	6.5	6.8
0	−35	2.3	2.6	2.7	2.8	2.9	2.9	3.2	3.3	3.5	3.6	3.5	3.9	4.1	4.3	4.4	4.2	4.7	4.9	5.1	5.3	5.0	5.6	5.9	6.1	6.4
	−30	1.9	2.2	2.3	2.4	2.5	2.5	2.8	2.9	3.0	3.2	3.1	3.5	3.6	3.8	4.0	3.8	4.3	4.4	4.6	4.8	4.6	5.2	5.4	5.6	5.8
	−25	1.6	1.8	1.9	2.0	2.1	2.1	2.4	2.5	2.6	2.7	2.7	3.1	3.2	3.3	3.5	3.4	3.8	4.0	4.1	4.3	4.2	4.7	4.9	5.1	5.3
	−20	1.2	1.4	1.5	1.6	1.6	1.8	2.0	2.1	2.2	2.3	2.4	2.7	2.8	2.9	3.0	3.0	3.4	3.5	3.7	3.8	3.8	4.2	4.4	4.6	4.8
	−15	0.9	1.0	1.1	1.2	1.2	1.4	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.6	2.6	2.9	3.1	3.2	3.4	3.3	3.7	3.9	4.1	4.2
	−10	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.3	1.3	1.4	1.6	1.8	1.9	2.0	2.1	2.2	2.5	2.6	2.7	2.8	2.9	3.3	3.4	3.5	3.7
	−5	0.1	0.2	0.3	0.3	0.4	0.6	0.8	0.8	0.9	0.9	1.2	1.4	1.4	1.5	1.6	1.8	2.0	2.1	2.2	2.3	2.4	2.8	2.9	3.0	3.2
	0	−0.4	−0.3	−0.3	−0.3	−0.2	0.1	0.2	0.2	0.3	0.3	0.6	0.8	0.8	0.9	0.9	1.2	1.4	1.5	1.5	1.6	1.8	2.1	2.2	2.3	2.4
	5	−0.9	−0.9	−0.9	−0.9	−0.9	−0.5	−0.4	−0.4	−0.4	−0.3	0.0	0.1	0.2	0.2	0.2	0.6	0.7	0.8	0.8	0.9	1.2	1.4	1.5	1.6	1.6
	10	−1.4	−1.4	−1.4	−1.5	−1.5	−1.0	−1.0	−1.0	−1.0	−1.0	−0.5	−0.5	−0.5	−0.4	−0.4	0.0	0.1	0.1	0.2	0.2	0.6	0.7	0.8	0.8	0.9
	12	−1.6	−1.7	−1.7	−1.7	−1.7	−1.2	−1.2	−1.2	−1.2	−1.2	−0.8	−0.7	−0.7	−0.7	−0.7	−0.3	−0.2	−0.2	−0.1	−0.1	0.3	0.4	0.5	0.5	0.6
		VENR=133 KIAS					VENR=130 KIAS					VENR=126 KIAS					VENR=123 KIAS					VENR=116 KIAS				
2	−54	0.9	1.1	1.2	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.9	3.0	3.1	3.3	3.3	3.7	3.8	4.0	4.1
5	−50	0.7	0.9	0.9	1.0	1.1	1.2	1.4	1.5	1.6	1.6	1.8	2.0	2.1	2.2	2.3	2.4	2.7	2.8	2.9	3.0	3.1	3.4	3.6	3.7	3.9
0	−45	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.2	1.3	1.4	1.5	1.7	1.8	1.9	2.0	2.1	2.4	2.5	2.6	2.7	2.8	3.1	3.3	3.4	3.5
0	−40	0.3	0.4	0.4	0.5	0.5	0.8	0.9	1.0	1.0	1.1	1.3	1.5	1.5	1.6	1.7	1.9	2.1	2.2	2.3	2.4	2.5	2.8	2.9	3.1	3.2
0	−35	0.0	0.1	0.1	0.2	0.2	0.5	0.6	0.6	0.7	0.7	1.0	1.1	1.2	1.3	1.3	1.5	1.8	1.8	1.9	2.0	2.2	2.5	2.6	2.7	2.8
	−30	−0.3	−0.2	−0.2	−0.2	−0.2	0.2	0.3	0.3	0.3	0.4	0.7	0.8	0.8	0.9	1.0	1.2	1.4	1.5	1.5	1.6	1.8	2.1	2.2	2.3	2.4
	−25	−0.6	−0.5	−0.5	−0.5	−0.5	−0.1	−0.1	0.0	0.0	0.0	0.3	0.4	0.5	0.5	0.6	0.9	1.0	1.1	1.1	1.2	1.5	1.7	1.8	1.9	1.9
	−20	−0.9	−0.8	−0.8	−0.8	−0.8	−0.4	−0.4	−0.4	−0.4	−0.3	0.0	0.1	0.1	0.2	0.2	0.5	0.7	0.7	0.8	0.8	1.1	1.3	1.4	1.5	1.5
	−15	−1.1	−1.1	−1.1	−1.2	−1.2	−0.7	−0.7	−0.7	−0.7	−0.7	−0.3	−0.2	−0.2	−0.2	−0.2	0.2	0.3	0.4	0.4	0.4	0.8	0.9	1.0	1.1	1.1
	−10	−1.5	−1.6	−1.6	−1.6	−1.6	−1.1	−1.1	−1.1	−1.1	−1.1	−0.7	−0.7	−0.7	−0.6	−0.6	−0.2	−0.1	−0.1	−0.1	−0.1	0.3	0.5	0.5	0.6	0.6
	−5	−1.9	−2.0	−2.0	−2.0	−2.0	−1.5	−1.6	−1.6	−1.6	−1.6	−1.1	−1.1	−1.1	−1.1	−1.1	−0.6	−0.6	−0.6	−0.6	−0.6	−0.1	0.0	0.0	0.0	0.1
	0	−2.3	−2.4	−2.4	−2.5	−2.5	−2.0	−2.0	−2.1	−2.1	−2.1	−1.6	−1.6	−1.6	−1.6	−1.6	−1.1	−1.1	−1.1	−1.1	−1.1	−0.6	−0.5	−0.5	−0.5	−0.5
	1	−2.5	−2.6	−2.6	−2.7	−2.7	−2.1	−2.2	−2.2	−2.3	−2.3	−1.7	−1.8	−1.8	−1.8	−1.8	−1.3	−1.3	−1.3	−1.3	−1.3	−0.8	−0.8	−0.7	−0.7	−0.7
		VENR=135 KIAS					VENR=132 KIAS					VENR=128 KIAS					VENR=124 KIAS					VENR=119 KIAS				
3	−54	−1.1	−1.1	−1.1	−1.1	−1.1	−0.7	−0.6	−0.6	−0.6	−0.6	−0.2	−0.2	−0.1	−0.1	−0.1	0.2	0.3	0.4	0.4	0.5	0.8	0.9	1.0	1.0	1.1
0	−50	−1.2	−1.2	−1.2	−1.2	−1.2	−0.8	−0.8	−0.8	−0.8	−0.8	−0.4	−0.3	−0.3	−0.3	−0.3	0.1	0.2	0.2	0.2	0.3	0.6	0.7	0.8	0.8	0.9
0	−45	−1.4	−1.4	−1.4	−1.4	−1.4	−1.0	−1.0	−1.0	−1.0	−1.0	−0.6	−0.6	−0.6	−0.6	−0.5	−0.1	−0.1	−0.1	0.0	0.0	0.4	0.5	0.5	0.6	0.6
0	−40	−1.6	−1.6	−1.6	−1.7	−1.7	−1.2	−1.2	−1.2	−1.2	−1.3	−0.8	−0.8	−0.8	−0.8	−0.8	−0.4	−0.3	−0.3	−0.3	−0.3	0.1	0.2	0.3	0.3	0.3
0	−35	−1.8	−1.9	−1.9	−1.9	−1.9	−1.5	−1.5	−1.5	−1.5	−1.5	−1.1	−1.1	−1.1	−1.1	−1.1	−0.6	−0.6	−0.6	−0.6	−0.6	−0.1	−0.1	0.0	0.0	0.0
	−30	−2.1	−2.1	−2.2	−2.2	−2.2	−1.7	−1.8	−1.8	−1.8	−1.8	−1.3	−1.4	−1.4	−1.4	−1.4	−0.9	−0.9	−0.9	−0.9	−0.9	−0.4	−0.4	−0.4	−0.3	−0.3
	−25	−2.3	−2.4	−2.4	−2.4	−2.5	−2.0	−2.0	−2.1	−2.1	−2.1	−1.6	−1.6	−1.6	−1.7	−1.7	−1.2	−1.2	−1.2	−1.2	−1.2	−0.7	−0.7	−0.7	−0.7	−0.7
	−20	−2.6	−2.7	−2.7	−2.7	−2.8	−2.2	−2.3	−2.4	−2.4	−2.4	−1.9	−1.9	−2.0	−2.0	−2.0	−1.5	−1.5	−1.5	−1.5	−1.5	−1.0	−1.0	−1.0	−1.0	−1.0
	−15	−2.8	−3.0	−3.0	−3.0	−3.1	−2.5	−2.6	−2.7	−2.7	−2.7	−2.2	−2.2	−2.3	−2.3	−2.3	−1.8	−1.8	−1.8	−1.9	−1.9	−1.3	−1.4	−1.4	−1.4	−1.4
	−10	−3.1	−3.3	−3.3	−3.4	−3.4	−2.8	−3.0	−3.0	−3.0	−3.1	−2.5	−2.6	−2.6	−2.7	−2.7	−2.1	−2.2	−2.2	−2.2	−2.3	−1.7	−1.7	−1.7	−1.8	−1.8
	−9	−3.2	−3.4	−3.4	−3.5	−3.5	−2.9	−3.0	−3.1	−3.1	−3.2	−2.6	−2.7	−2.7	−2.8	−2.8	−2.2	−2.3	−2.3	−2.3	−2.4	−1.8	−1.8	−1.9	−1.9	−1.9
		VENR=140 KIAS					VENR=136 KIAS					VENR=132 KIAS					VENR=126 KIAS					VENR=122 KIAS				
3	−54	−2.7	−2.8	−2.8	−2.8	−2.9	−2.4	−2.4	−2.5	−2.5	−2.5	−2.0	−2.1	−2.1	−2.1	−2.2	−1.7	−1.7	−1.7	−1.7	−1.8	−1.3	−1.3	−1.3	−1.3	−1.3
5	−50	−2.8	−2.9	−2.9	−3.0	−3.0	−2.5	−2.6	−2.6	−2.7	−2.7	−2.2	−2.3	−2.3	−2.3	−2.3	−1.8	−1.9	−1.9	−1.9	−1.9	−1.4	−1.4	−1.4	−1.4	−1.5
0	−45	−2.9	−3.1	−3.1	−3.1	−3.2	−2.7	−2.8	−2.8	−2.8	−2.9	−2.4	−2.4	−2.5	−2.5	−2.5	−2.0	−2.1	−2.1	−2.1	−2.1	−1.6	−1.6	−1.6	−1.7	−1.7
0	−40	−3.1	−3.2	−3.3	−3.3	−3.4	−2.9	−3.0	−3.0	−3.0	−3.1	−2.6	−2.6	−2.7	−2.7	−2.7	−2.2	−2.3	−2.3	−2.3	−2.4	−1.8	−1.9	−1.9	−1.9	−1.9
0	−35	−3.3	−3.4	−3.5	−3.5	−3.6	−3.0	−3.2	−3.2	−3.2	−3.3	−2.7	−2.9	−2.9	−2.9	−3.0	−2.4	−2.5	−2.5	−2.6	−2.6	−2.0	−2.1	−2.1	−2.1	−2.2
	−30	−3.5	−3.6	−3.7	−3.7	−3.8	−3.2	−3.4	−3.4	−3.5	−3.5	−3.0	−3.1	−3.1	−3.1	−3.2	−2.6	−2.7	−2.8	−2.8	−2.8	−2.2	−2.3	−2.4	−2.4	−2.4
	−25	−3.7	−3.8	−3.9	−3.9	−4.0	−3.4	−3.6	−3.6	−3.7	−3.7	−3.2	−3.3	−3.3	−3.4	−3.4	−2.8	−2.9	−3.0	−3.0	−3.1	−2.5	−2.6	−2.6	−2.6	−2.7
	−20	−3.9	−4.1	−4.1	−4.2	−4.2	−3.7	−3.8	−3.9	−3.9	−4.0	−3.4	−3.5	−3.6	−3.6	−3.7	−3.1	−3.2	−3.2	−3.3	−3.3	−2.7	−2.8	−2.9	−2.9	−3.0

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Figure 4-42 (Sheet 4)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																			
		12375					12200					12000					11500					11000				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
		VENR=159 KIAS					VENR=157 KIAS					VENR=156 KIAS					VENR=152 KIAS					VENR=147 KIAS				
4	-54	-4.5	-4.7	-4.7	-4.8	-4.8	-4.4	-4.6	-4.7	-4.7	-4.8	-4.4	-4.5	-4.6	-4.6	-4.7	-4.2	-4.3	-4.4	-4.5	-4.5	-4.0	-4.1	-4.2	-4.2	-4.3
0	-50	-4.6	-4.8	-4.8	-4.9	-4.9	-4.6	-4.7	-4.8	-4.8	-4.9	-4.5	-4.7	-4.7	-4.8	-4.8	-4.3	-4.5	-4.6	-4.6	-4.7	-4.2	-4.3	-4.4	-4.4	-4.5
0	-45	-4.7	-4.9	-4.9	-5.0	-5.1	-4.7	-4.8	-4.9	-5.0	-5.0	-4.6	-4.8	-4.8	-4.9	-5.0	-4.5	-4.6	-4.7	-4.8	-4.8	-4.3	-4.5	-4.5	-4.6	-4.6
0	-40	-4.8	-5.0	-5.1	-5.2	-5.2	-4.8	-5.0	-5.0	-5.1	-5.2	-4.8	-4.9	-5.0	-5.1	-5.1	-4.6	-4.8	-4.8	-4.9	-5.0	-4.5	-4.6	-4.7	-4.7	-4.8
0	-35	-5.0	-5.2	-5.3	-5.3	-5.4	-5.0	-5.1	-5.2	-5.3	-5.3	-4.9	-5.1	-5.2	-5.2	-5.3	-4.8	-5.0	-5.0	-5.1	-5.1	-4.6	-4.8	-4.9	-4.9	-5.0
	-30	-5.2	-5.4	-5.5	-5.5	-5.6	-5.2	-5.4	-5.4	-5.5	-5.6	-5.1	-5.3	-5.4	-5.4	-5.5	-5.0	-5.2	-5.2	-5.3	-5.4	-4.8	-5.0	-5.1	-5.1	-5.2
	-25	-5.4	-5.6	-5.7	-5.7	-5.8	-5.4	-5.6	-5.6	-5.7	-5.8	-5.3	-5.5	-5.6	-5.7	-5.7	-5.2	-5.4	-5.4	-5.5	-5.6	-5.0	-5.2	-5.3	-5.4	-5.4
	-22	-5.5	-5.7	-5.8	-5.9	-6.0	-5.5	-5.7	-5.8	-5.8	-5.9	-5.5	-5.7	-5.7	-5.8	-5.9	-5.3	-5.5	-5.6	-5.7	-5.7	-5.2	-5.4	-5.4	-5.5	-5.6
		VENR=163 KIAS					VENR=162 KIAS					VENR=160 KIAS					VENR=156 KIAS					VENR=152 KIAS				
4	-54	-5.2	-5.4	-5.4	-5.5	-5.5	-5.2	-5.3	-5.4	-5.4	-5.5	-5.1	-5.3	-5.3	-5.4	-5.5	-5.0	-5.2	-5.2	-5.3	-5.4	-4.9	-5.1	-5.1	-5.2	-5.3
5	-50	-5.3	-5.4	-5.5	-5.6	-5.6	-5.2	-5.4	-5.5	-5.5	-5.6	-5.2	-5.4	-5.4	-5.5	-5.6	-5.1	-5.3	-5.3	-5.4	-5.5	-5.0	-5.2	-5.2	-5.3	-5.3
0	-45	-5.4	-5.6	-5.6	-5.7	-5.8	-5.4	-5.5	-5.6	-5.7	-5.7	-5.3	-5.5	-5.6	-5.6	-5.7	-5.2	-5.4	-5.5	-5.5	-5.6	-5.1	-5.3	-5.3	-5.4	-5.5
0	-40	-5.6	-5.8	-5.8	-5.9	-5.9	-5.5	-5.7	-5.8	-5.9	-5.9	-5.5	-5.7	-5.7	-5.8	-5.9	-5.4	-5.6	-5.6	-5.7	-5.8	-5.3	-5.5	-5.5	-5.6	-5.7
0	-35	-5.8	-6.0	-6.0	-6.1	-6.2	-5.7	-5.9	-6.0	-6.1	-6.1	-5.7	-5.9	-5.9	-6.0	-6.1	-5.6	-5.8	-5.8	-5.9	-6.0	-5.5	-5.7	-5.7	-5.8	-5.9
	-30	-6.0	-6.2	-6.3	-6.3	-6.4	-6.0	-6.2	-6.2	-6.3	-6.4	-5.9	-6.1	-6.2	-6.3	-6.3	-5.8	-6.0	-6.1	-6.2	-6.2	-5.7	-5.9	-6.0	-6.1	-6.1
	-25	-6.2	-6.4	-6.5	-6.6	-6.6	-6.2	-6.4	-6.5	-6.5	-6.6	-6.2	-6.4	-6.4	-6.5	-6.6	-6.1	-6.3	-6.4	-6.4	-6.5	-6.0	-6.2	-6.3	-6.4	-6.4
	-22	-6.3	-6.6	-6.6	-6.7	-6.8	-6.3	-6.5	-6.6	-6.7	-6.8	-6.3	-6.5	-6.6	-6.7	-6.7	-6.2	-6.4	-6.5	-6.6	-6.7	-6.1	-6.4	-6.4	-6.5	-6.6

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Figure 4-42 (Sheet 5)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - OFF**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																			
		10500					10000					9500					9000					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
		VENR=144 KIAS					VENR=139 KIAS					VENR=135 KIAS					VENR=131 KIAS					VENR=125 KIAS				
4	-54	-3.8	-3.9	-4.0	-4.0	-4.1	-3.6	-3.7	-3.8	-3.8	-3.9	-3.4	-3.5	-3.6	-3.6	-3.7	-3.1	-3.3	-3.3	-3.3	-3.4	-2.8	-2.9	-3.0	-3.0	-3.1
0	-50	-4.0	-4.1	-4.2	-4.2	-4.3	-3.8	-3.9	-4.0	-4.0	-4.1	-3.5	-3.7	-3.7	-3.8	-3.8	-3.3	-3.4	-3.4	-3.5	-3.5	-3.0	-3.1	-3.1	-3.2	-3.2
0	-45	-4.1	-4.3	-4.3	-4.4	-4.5	-3.9	-4.1	-4.1	-4.2	-4.2	-3.7	-3.8	-3.9	-3.9	-4.0	-3.4	-3.6	-3.6	-3.7	-3.7	-3.1	-3.3	-3.3	-3.3	-3.4
0	-40	-4.3	-4.4	-4.5	-4.6	-4.6	-4.1	-4.2	-4.3	-4.3	-4.4	-3.9	-4.0	-4.1	-4.1	-4.2	-3.6	-3.7	-3.8	-3.8	-3.9	-3.3	-3.4	-3.5	-3.5	-3.6
0	-35	-4.4	-4.6	-4.7	-4.7	-4.8	-4.2	-4.4	-4.5	-4.5	-4.6	-4.0	-4.2	-4.2	-4.3	-4.4	-3.8	-3.9	-4.0	-4.0	-4.1	-3.5	-3.6	-3.7	-3.7	-3.8
	-30	-4.7	-4.8	-4.9	-5.0	-5.0	-4.5	-4.6	-4.7	-4.8	-4.8	-4.2	-4.4	-4.5	-4.5	-4.6	-4.0	-4.2	-4.2	-4.3	-4.3	-3.7	-3.9	-3.9	-4.0	-4.0
	-25	-4.9	-5.1	-5.1	-5.2	-5.3	-4.7	-4.9	-4.9	-5.0	-5.1	-4.5	-4.6	-4.7	-4.8	-4.8	-4.2	-4.4	-4.4	-4.5	-4.6	-3.9	-4.1	-4.1	-4.2	-4.3
	-22	-5.0	-5.2	-5.3	-5.3	-5.4	-4.8	-5.0	-5.1	-5.2	-5.2	-4.6	-4.8	-4.9	-4.9	-5.0	-4.4	-4.6	-4.6	-4.7	-4.8	-4.1	-4.3	-4.3	-4.4	-4.5
		VENR=147 KIAS					VENR=143 KIAS					VENR=138 KIAS					VENR=134 KIAS					VENR=130 KIAS				
4	-54	-4.8	-4.9	-5.0	-5.1	-5.1	-4.6	-4.8	-4.8	-4.9	-5.0	-4.4	-4.6	-4.7	-4.7	-4.8	-4.2	-4.4	-4.5	-4.5	-4.6	-4.0	-4.2	-4.2	-4.3	-4.3
5	-50	-4.8	-5.0	-5.1	-5.1	-5.2	-4.7	-4.9	-4.9	-5.0	-5.1	-4.5	-4.7	-4.8	-4.8	-4.9	-4.3	-4.5	-4.6	-4.6	-4.7	-4.1	-4.3	-4.3	-4.4	-4.5
0	-45	-5.0	-5.2	-5.2	-5.3	-5.3	-4.8	-5.0	-5.1	-5.1	-5.2	-4.7	-4.8	-4.9	-5.0	-5.0	-4.5	-4.6	-4.7	-4.8	-4.8	-4.3	-4.4	-4.5	-4.5	-4.6
0	-40	-5.1	-5.3	-5.4	-5.5	-5.5	-5.0	-5.2	-5.2	-5.3	-5.4	-4.8	-5.0	-5.1	-5.1	-5.2	-4.6	-4.8	-4.9	-4.9	-5.0	-4.4	-4.6	-4.6	-4.7	-4.8
0	-35	-5.3	-5.5	-5.6	-5.7	-5.7	-5.2	-5.4	-5.4	-5.5	-5.6	-5.0	-5.2	-5.3	-5.3	-5.4	-4.8	-5.0	-5.1	-5.1	-5.2	-4.6	-4.8	-4.9	-4.9	-5.0
	-30	-5.6	-5.8	-5.9	-6.0	-6.0	-5.5	-5.7	-5.8	-5.8	-5.9	-5.3	-5.5	-5.6	-5.7	-5.7	-5.2	-5.3	-5.4	-5.5	-5.6	-5.0	-5.1	-5.2	-5.3	-5.4
	-25	-5.9	-6.1	-6.2	-6.3	-6.3	-5.8	-6.0	-6.1	-6.1	-6.2	-5.6	-5.8	-5.9	-6.0	-6.1	-5.5	-5.7	-5.8	-5.8	-5.9	-5.3	-5.5	-5.6	-5.6	-5.7
	-22	-6.0	-6.3	-6.3	-6.4	-6.5	-5.9	-6.1	-6.2	-6.3	-6.4	-5.8	-6.0	-6.1	-6.2	-6.2	-5.6	-5.9	-5.9	-6.0	-6.1	-5.5	-5.7	-5.8	-5.8	-5.9

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Figure 4-42 (Sheet 6)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 12375 WIND KNOTS −10	0	10	20	30	12200 WIND KNOTS −10	0	10	20	30	12000 WIND KNOTS −10	0	10	20	30	11500 WIND KNOTS −10	0	10	20	30	11000 WIND KNOTS −10	0	10	20	30
		VENR=138 KIAS					VENR=137 KIAS					VENR=136 KIAS					VENR=133 KIAS					VENR=131 KIAS				
0	−35	3.2	3.7	3.9	4.1	4.4	3.4	3.9	4.1	4.4	4.6	3.6	4.2	4.4	4.6	4.9	4.2	4.8	5.1	5.4	5.7	4.8	5.5	5.8	6.1	6.5
	−30	3.2	3.7	3.9	4.1	4.3	3.4	3.9	4.1	4.3	4.6	3.6	4.1	4.3	4.6	4.8	4.1	4.8	5.0	5.3	5.6	4.8	5.5	5.8	6.1	6.4
	−25	3.1	3.6	3.8	4.0	4.3	3.3	3.8	4.1	4.3	4.5	3.5	4.1	4.3	4.5	4.8	4.1	4.7	5.0	5.2	5.5	4.7	5.4	5.7	6.0	6.4
	−20	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.2	4.5	3.5	4.1	4.3	4.5	4.7	4.1	4.7	4.9	5.2	5.5	4.7	5.4	5.7	6.0	6.3
	−15	3.1	3.6	3.8	4.0	4.2	3.3	3.8	4.0	4.2	4.4	3.5	4.0	4.2	4.5	4.7	4.0	4.7	4.9	5.2	5.4	4.7	5.4	5.6	5.9	6.2
	−10	3.1	3.6	3.7	3.9	4.2	3.3	3.8	4.0	4.2	4.4	3.5	4.0	4.2	4.4	4.7	4.0	4.6	4.9	5.1	5.4	4.6	5.3	5.6	5.9	6.2
	−5	3.1	3.5	3.7	3.9	4.1	3.2	3.7	3.9	4.1	4.4	3.5	4.0	4.2	4.4	4.6	4.0	4.6	4.8	5.1	5.4	4.6	5.3	5.6	5.9	6.2
	0	3.1	3.5	3.7	3.9	4.1	3.2	3.7	3.9	4.1	4.3	3.5	4.0	4.2	4.4	4.6	4.0	4.6	4.8	5.1	5.4	4.6	5.3	5.6	5.8	6.2
	5	3.1	3.5	3.7	3.9	4.1	3.2	3.7	3.9	4.1	4.3	3.4	4.0	4.2	4.4	4.6	4.0	4.6	4.8	5.1	5.3	4.6	5.3	5.5	5.8	6.1
	10	3.0	3.5	3.7	3.8	4.0	3.2	3.7	3.9	4.1	4.3	3.4	3.9	4.1	4.3	4.6	4.0	4.6	4.8	5.0	5.3	4.6	5.3	5.5	5.8	6.1
		VENR=139 KIAS					VENR=138 KIAS					VENR=137 KIAS					VENR=134 KIAS					VENR=131 KIAS				
5	−35	2.7	3.1	3.2	3.4	3.6	2.8	3.3	3.4	3.6	3.8	3.0	3.5	3.7	3.8	4.1	3.6	4.1	4.3	4.5	4.8	4.2	4.8	5.0	5.3	5.5
0	−30	2.6	3.0	3.1	3.3	3.5	2.7	3.2	3.3	3.5	3.7	3.0	3.4	3.6	3.7	3.9	3.5	4.0	4.2	4.4	4.6	4.1	4.7	4.9	5.1	5.4
0	−25	2.5	2.9	3.0	3.2	3.4	2.7	3.1	3.2	3.4	3.6	2.9	3.3	3.5	3.7	3.8	3.4	3.9	4.1	4.3	4.5	4.0	4.6	4.8	5.0	5.3
0	−20	2.4	2.8	3.0	3.1	3.3	2.6	3.0	3.2	3.3	3.5	2.8	3.2	3.4	3.6	3.8	3.4	3.8	4.0	4.2	4.4	3.9	4.5	4.7	4.9	5.2
	−15	2.4	2.8	2.9	3.0	3.2	2.6	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.7	3.3	3.8	3.9	4.1	4.4	3.9	4.4	4.6	4.9	5.1
	−10	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.0	3.2	3.3	2.7	3.1	3.3	3.4	3.6	3.2	3.7	3.9	4.1	4.3	3.8	4.3	4.6	4.8	5.0
	−5	2.3	2.6	2.8	2.9	3.1	2.5	2.8	3.0	3.1	3.3	2.7	3.0	3.2	3.3	3.5	3.2	3.6	3.8	4.0	4.2	3.8	4.3	4.5	4.7	4.9
	0	2.2	2.5	2.6	2.8	2.9	2.3	2.7	2.8	3.0	3.1	2.5	2.9	3.0	3.2	3.4	3.1	3.5	3.7	3.8	4.0	3.6	4.1	4.3	4.5	4.8
	5	1.7	2.0	2.1	2.2	2.3	1.9	2.2	2.3	2.4	2.5	2.1	2.4	2.5	2.6	2.8	2.6	3.0	3.1	3.3	3.4	3.2	3.6	3.8	4.0	4.2
	10	1.0	1.3	1.3	1.4	1.5	1.2	1.4	1.5	1.6	1.7	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.4	2.6	2.4	2.8	2.9	3.1	3.2
		VENR=141 KIAS					VENR=140 KIAS					VENR=138 KIAS					VENR=136 KIAS					VENR=132 KIAS				
1	−35	2.4	2.8	2.9	3.0	3.2	2.6	2.9	3.1	3.2	3.4	2.8	3.2	3.3	3.5	3.6	3.3	3.8	3.9	4.1	4.3	3.9	4.4	4.6	4.8	5.1
0	−30	2.3	2.6	2.7	2.9	3.0	2.4	2.8	2.9	3.1	3.2	2.6	3.0	3.2	3.3	3.5	3.2	3.6	3.8	3.9	4.1	3.8	4.2	4.4	4.6	4.9
0	−25	2.1	2.5	2.6	2.7	2.8	2.3	2.6	2.8	2.9	3.0	2.5	2.9	3.0	3.1	3.3	3.0	3.4	3.6	3.8	3.9	3.6	4.1	4.3	4.5	4.7
0	−20	1.8	2.0	2.1	2.2	2.4	1.9	2.2	2.3	2.4	2.6	2.1	2.4	2.5	2.7	2.8	2.6	3.0	3.1	3.3	3.4	3.2	3.6	3.8	4.0	4.1
0	−15	1.4	1.6	1.7	1.8	1.9	1.5	1.8	1.9	2.0	2.1	1.7	2.0	2.1	2.2	2.3	2.2	2.5	2.6	2.8	2.9	2.7	3.1	3.3	3.4	3.6
	−10	1.0	1.2	1.3	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.3	1.6	1.7	1.7	1.8	1.8	2.1	2.2	2.3	2.4	2.3	2.7	2.8	2.9	3.1
	−5	0.7	0.9	0.9	1.0	1.1	0.8	1.0	1.1	1.2	1.2	1.0	1.2	1.3	1.4	1.5	1.5	1.7	1.8	1.9	2.0	2.0	2.3	2.4	2.5	2.7
	0	0.3	0.5	0.5	0.5	0.6	0.5	0.6	0.7	0.7	0.8	0.6	0.8	0.9	0.9	1.0	1.1	1.3	1.4	1.5	1.5	1.6	1.9	1.9	2.1	2.2
	5	−0.3	−0.2	−0.2	−0.1	−0.1	−0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.5	0.6	0.7	0.7	0.8	0.9	1.1	1.2	1.3	1.4
	10	−0.8	−0.8	−0.8	−0.8	−0.7	−0.7	−0.6	−0.6	−0.6	−0.6	−0.5	−0.5	−0.4	−0.4	−0.4	−0.1	0.0	0.0	0.0	0.1	0.3	0.5	0.5	0.6	0.6
		VENR=143 KIAS					VENR=141 KIAS					VENR=140 KIAS					VENR=137 KIAS					VENR=134 KIAS				
1	−35	0.8	1.0	1.1	1.1	1.2	1.0	1.2	1.2	1.3	1.4	1.2	1.4	1.4	1.5	1.6	1.6	1.9	2.0	2.1	2.2	2.1	2.4	2.5	2.7	2.8
5	−30	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.8	0.9	0.9	0.8	0.9	1.0	1.1	1.1	1.2	1.4	1.5	1.6	1.7	1.7	2.0	2.1	2.2	2.3
0	−25	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.8	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8
0	−20	−0.3	−0.2	−0.2	−0.2	−0.1	−0.1	−0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.6	0.7	0.7	0.9	1.1	1.1	1.2	1.3
0	−15	−0.6	−0.6	−0.5	−0.5	−0.5	−0.5	−0.4	−0.4	−0.4	−0.4	−0.3	−0.2	−0.2	−0.2	−0.2	0.1	0.2	0.2	0.3	0.3	0.5	0.7	0.7	0.8	0.8
	−10	−0.9	−0.9	−0.9	−0.9	−0.8	−0.8	−0.7	−0.7	−0.7	−0.7	−0.6	−0.6	−0.6	−0.5	−0.5	−0.2	−0.1	−0.1	−0.1	−0.1	0.2	0.3	0.4	0.4	0.5
	−5	−1.2	−1.2	−1.2	−1.2	−1.2	−1.1	−1.1	−1.1	−1.1	−1.1	−0.9	−0.9	−0.9	−0.9	−0.9	−0.5	−0.5	−0.5	−0.5	−0.4	−0.1	0.0	0.0	0.0	0.1
	0	−1.6	−1.6	−1.6	−1.7	−1.7	−1.5	−1.5	−1.5	−1.5	−1.5	−1.3	−1.4	−1.4	−1.4	−1.4	−1.0	−1.0	−1.0	−1.0	−0.9	−0.6	−0.5	−0.5	−0.5	−0.5
	5	−2.0	−2.1	−2.1	−2.1	−2.2	−1.9	−1.9	−2.0	−2.0	−2.0	−1.7	−1.8	−1.8	−1.8	−1.9	−1.4	−1.4	−1.4	−1.4	−1.5	−1.0	−1.0	−1.0	−1.0	−1.0
	10	−2.5	−2.6	−2.6	−2.7	−2.7	−2.4	−2.5	−2.5	−2.5	−2.6	−2.2	−2.3	−2.4	−2.4	−2.4	−1.9	−2.0	−2.0	−2.0	−2.1	−1.6	−1.6	−1.6	−1.6	−1.7
		VENR=142 KIAS					VENR=141 KIAS					VENR=140 KIAS					VENR=137 KIAS					VENR=132 KIAS				
2	−35	−1.1	−1.1	−1.1	−1.1	−1.1	−1.0	−1.0	−1.0	−1.0	−1.0	−0.8	−0.8	−0.8	−0.8	−0.8	−0.5	−0.4	−0.4	−0.4	−0.4	−0.1	0.0	0.0	0.1	0.1
0	−30	−1.4	−1.4	−1.5	−1.5	−1.5	−1.3	−1.3	−1.3	−1.3	−1.3	−1.2	−1.2	−1.2	−1.2	−1.2	−0.8	−0.8	−0.8	−0.8	−0.8	−0.4	−0.4	−0.4	−0.3	−0.3
0	−25	−1.7	−1.8	−1.8	−1.8	−1.8	−1.6	−1.7	−1.7	−1.7	−1.7	−1.5	−1.5	−1.5	−1.5	−1.6	−1.1	−1.1	−1.2	−1.2	−1.2	−0.8	−0.7	−0.7	−0.7	−0.7
0	−20	−2.2	−2.2	−2.3	−2.3	−2.3	−2.1	−2.1	−2.2	−2.2	−2.2	−1.9	−2.0	−2.0	−2.0	−2.1	−1.6	−1.6	−1.7	−1.7	−1.7	−1.2	−1.2	−1.2	−1.2	−1.2
0	−15	−2.7	−2.8	−2.9	−2.9	−2.9	−2.6	−2.7	−2.7	−2.8	−2.8	−2.5	−2.6	−2.6	−2.7	−2.7	−2.2	−2.2	−2.3	−2.3	−2.3	−1.8	−1.9	−1.9	−1.9	−1.9
	−10	−3.1	−3.3	−3.3	−3.4	−3.5	−3.0	−3.2	−3.2	−3.3	−3.4	−2.9	−3.1	−3.1	−3.2	−3.2	−2.6	−2.8	−2.8	−2.9	−2.9	−2.3	−2.4	−2.5	−2.5	−2.5
	−5	−3.6	−3.8	−3.8	−3.9	−4.0	−3.5	−3.7	−3.7	−3.8	−3.9	−3.4	−3.6	−3.6	−3.7	−3.8	−3.1	−3.3	−3.3	−3.4	−3.5	−2.8	−3.0	−3.0	−3.1	−3.1
	0	−3.9	−4.1	−4.2	−4.3	−4.4	−3.8	−4.1	−4.1	−4.2	−4.3	−3.8	−4.0	−4.0	−4.1	−4.2	−3.5	−3.7	−3.8	−3.8	−3.9	−3.2	−3.4	−3.5	−3.5	−3.6
	5	−4.3	−4.5	−4.6	−4.7	−4.8	−4.2	−4.4	−4.5	−4.6	−4.7	−4.1	−4.3	−4.4	−4.5	−4.6	−3.9	−4.1	−4.2	−4.3	−4.4	−3.6	−3.8	−3.9	−4.0	−4.1
	10	−4.6	−4.9	−5.0	−5.1	−5.2	−4.6	−4.8	−4.9	−5.0	−5.1	−4.5	−4.7	−4.8	−4.9	−5.0	−4.3	−4.5	−4.6	−4.7	−4.8	−4.0	−4.3	−4.3	−4.4	−4.5
		VENR=144 KIAS					VENR=143 KIAS					VENR=142 KIAS					VENR=139 KIAS					VENR=135 KIAS				
2	−35	−3.2	−3.3	−3.4	−3.4	−3.5	−3.1	−3.2	−3.3	−3.4	−3.4	−3.0	−3.1	−3.2	−3.2	−3.3	−2.7	−2.9	−2.9	−3.0	−3.0	−2.4	−2.6	−2.6	−2.6	−2.7
5	−30	−3.4	−3.6	−3.7	−3.7	−3.8	−3.4	−3.5	−3.6	−3.6	−3.7	−3.3	−3.4	−3.5	−3.5	−3.6	−3.0	−3.1	−3.2	−3.2	−3.3	−2.7	−2.8	−2.9	−2.9	−3.0
0	−25	−3.8	−4.0	−4.1	−4.1	−4.2	−3.7	−3.9	−4.0	−4.1	−4.1	−3.6	−3.8	−3.9	−4.0	−4.0	−3.4	−3.6	−3.6	−3.7	−3.7	−3.1	−3.3	−3.3	−3.4	−3.4
0	−20	−4.2	−4.4	−4.5	−4.6	−4.6	−4.1	−4.3	−4.4	−4.5	−4.6	−4.0	−4.2	−4.3	−4.4	−4.5	−3.8	−4.0	−4.1	−4.1	−4.2	−3.5	−3.7	−3.8	−3.8	−3.9
0	−15	−4.6	−4.8	−4.9	−5.0	−5.1	−4.5	−4.7	−4.8	−4.9	−5.0	−4.4	−4.6	−4.7	−4.8	−4.9	−4.2	−4.4	−4.5	−4.6	−4.7	−4.0	−4.2	−4.2	−4.3	−4.4
	−10	−4.9	−5.1	−5.2	−5.3	−5.4	−4.8	−5.0	−5.1	−5.2	−5.3	−4.7	−5.0	−5.1	−5.1	−5.2	−4.5	−4.8	−4.8	−4.9	−5.0	−4.3	−4.5	−4.6	−4.7	−4.8
	−5	−5.2	−5.4	−5.5	−5.6	−5.7	−5.1	−5.4	−5.5	−5.6	−5.7	−5.0	−5.3	−5.4	−5.5	−5.6	−4.8	−5.1	−5.2	−5.3	−5.4	−4.6	−4.9	−5.0	−5.1	−5.2
	0	−5.4	−5.7	−5.8	−5.9	−6.0	−5.4	−5.7	−5.8	−5.9	−6.0	−5.3	−5.6	−5.7	−5.8	−5.9	−5.1	−5.4	−5.5	−5.6	−5.7	−5.0	−5.2	−5.3	−5.4	−5.5
	1	−5.5	−5.8	−5.9	−6.0	−6.1	−5.5	−5.8	−5.9	−6.0	−6.1	−5.4	−5.7	−5.8	−5.9	−6.0	−5.2	−5.5	−5.6	−5.7	−5.8	−5.1	−5.3	−5.4	−5.5	−5.6

525AFM-06-00

Figure 4-43 (Sheet 1 of 4)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 10500 WIND KNOTS -10	0	10	20	30	10000 WIND KNOTS -10	0	10	20	30	9500 WIND KNOTS -10	0	10	20	30	9000 WIND KNOTS -10	0	10	20	30	8500 WIND KNOTS -10	0	10	20	30
		VENR=128 KIAS					VENR=125 KIAS					VENR=122 KIAS					VENR=118 KIAS					VENR=115 KIAS				
0	-35	5.5	6.3	6.6	7.0	7.4	6.2	7.1	7.5	7.9	8.4	7.0	8.1	8.5	9.0	9.5	7.9	9.1	9.6	10.2	10.8	8.9	10.3	10.9	11.5	12.2
	-30	5.4	6.2	6.6	6.9	7.3	6.1	7.1	7.5	7.9	8.3	6.9	8.0	8.5	8.9	9.4	7.8	9.1	9.6	10.1	10.7	8.8	10.3	10.8	11.4	12.1
	-25	5.4	6.2	6.5	6.9	7.3	6.1	7.0	7.4	7.8	8.3	6.9	8.0	8.4	8.9	9.4	7.8	9.0	9.5	10.0	10.6	8.8	10.2	10.8	11.4	12.0
	-20	5.3	6.2	6.5	6.8	7.2	6.1	7.0	7.4	7.7	8.2	6.9	7.9	8.3	8.8	9.3	7.8	9.0	9.4	10.0	10.6	8.8	10.1	10.7	11.3	12.0
	-15	5.3	6.1	6.4	6.8	7.1	6.0	7.0	7.3	7.7	8.1	6.9	7.9	8.3	8.7	9.2	7.7	8.9	9.4	9.9	10.5	8.7	10.1	10.6	11.2	11.9
	-10	5.3	6.1	6.4	6.7	7.1	6.0	6.9	7.3	7.7	8.1	6.8	7.9	8.3	8.7	9.2	7.7	8.9	9.4	9.9	10.4	8.7	10.1	10.6	11.2	11.8
	-5	5.3	6.1	6.4	6.7	7.1	6.0	6.9	7.3	7.6	8.0	6.8	7.8	8.2	8.7	9.1	7.7	8.9	9.3	9.8	10.4	8.7	10.0	10.6	11.1	11.8
	0	5.3	6.1	6.4	6.7	7.0	6.0	6.9	7.2	7.6	8.0	6.8	7.8	8.2	8.6	9.1	7.7	8.9	9.3	9.8	10.4	8.7	10.0	10.5	11.1	11.7
	5	5.3	6.0	6.3	6.7	7.0	6.0	6.9	7.2	7.6	8.0	6.8	7.8	8.2	8.6	9.1	7.7	8.8	9.3	9.8	10.3	8.7	10.0	10.5	11.1	11.7
	10	5.3	6.0	6.3	6.6	7.0	6.0	6.9	7.2	7.6	8.0	6.8	7.8	8.2	8.6	9.1	7.7	8.8	9.3	9.8	10.3	8.7	10.0	10.5	11.1	11.7
		VENR=127 KIAS					VENR=124 KIAS					VENR=121 KIAS					VENR=119 KIAS					VENR=115 KIAS				
5	-35	4.8	5.5	5.8	6.1	6.4	5.5	6.3	6.6	7.0	7.3	6.3	7.2	7.6	8.0	8.4	7.2	8.2	8.6	9.1	9.6	8.1	9.3	9.8	10.3	10.9
0	-30	4.7	5.4	5.7	5.9	6.3	5.4	6.2	6.5	6.8	7.2	6.2	7.1	7.5	7.8	8.3	7.1	8.1	8.5	8.9	9.4	8.0	9.2	9.7	10.2	10.7
0	-25	4.6	5.3	5.6	5.8	6.1	5.3	6.1	6.4	6.7	7.1	6.1	7.0	7.3	7.7	8.1	7.0	8.0	8.4	8.8	9.3	7.9	9.1	9.5	10.0	10.6
0	-20	4.6	5.2	5.5	5.7	6.0	5.3	6.0	6.3	6.6	7.0	6.0	6.9	7.2	7.6	8.0	6.9	7.9	8.3	8.7	9.1	7.9	9.0	9.4	9.9	10.4
	-15	4.5	5.1	5.4	5.6	5.9	5.2	5.9	6.2	6.5	6.9	6.0	6.8	7.1	7.5	7.9	6.8	7.8	8.2	8.6	9.0	7.8	8.9	9.3	9.8	10.3
	-10	4.4	5.1	5.3	5.6	5.8	5.1	5.9	6.1	6.4	6.8	5.9	6.7	7.1	7.4	7.8	6.8	7.7	8.1	8.5	8.9	7.7	8.8	9.2	9.7	10.2
	-5	4.4	5.0	5.2	5.5	5.8	5.1	5.8	6.1	6.4	6.7	5.8	6.7	7.0	7.3	7.7	6.7	7.6	8.0	8.4	8.8	7.6	8.7	9.1	9.6	10.1
	0	4.3	4.9	5.1	5.3	5.6	4.9	5.6	5.9	6.2	6.5	5.7	6.5	6.8	7.2	7.5	6.6	7.5	7.8	8.2	8.6	7.5	8.5	9.0	9.4	9.9
	5	3.8	4.3	4.5	4.7	5.0	4.5	5.1	5.3	5.6	5.9	5.2	5.9	6.2	6.5	6.9	6.0	6.9	7.2	7.6	7.9	7.0	7.9	8.3	8.7	9.2
	10	3.0	3.4	3.6	3.8	4.0	3.6	4.2	4.4	4.6	4.8	4.4	5.0	5.2	5.5	5.8	5.1	5.9	6.1	6.5	6.8	6.0	6.9	7.2	7.5	7.9
		VENR=128 KIAS					VENR=126 KIAS					VENR=122 KIAS					VENR=118 KIAS					VENR=115 KIAS				
1	-35	4.5	5.1	5.4	5.6	5.9	5.2	5.9	6.2	6.5	6.8	6.0	6.8	7.1	7.4	7.8	6.9	7.8	8.1	8.5	9.0	7.8	8.9	9.3	9.7	10.2
0	-30	4.4	5.0	5.2	5.4	5.7	5.1	5.7	6.0	6.3	6.6	5.8	6.6	6.9	7.2	7.6	6.7	7.6	7.9	8.3	8.7	7.7	8.7	9.1	9.5	10.0
0	-25	4.2	4.8	5.0	5.2	5.5	4.9	5.6	5.8	6.1	6.4	5.7	6.4	6.7	7.0	7.4	6.5	7.4	7.7	8.1	8.5	7.5	8.5	8.9	9.3	9.8
0	-20	3.8	4.3	4.5	4.7	4.9	4.5	5.1	5.3	5.5	5.8	5.2	5.9	6.2	6.4	6.7	6.0	6.8	7.1	7.5	7.8	7.0	7.9	8.2	8.6	9.1
0	-15	3.3	3.8	4.0	4.1	4.3	4.0	4.5	4.7	4.9	5.2	4.7	5.3	5.6	5.8	6.1	5.5	6.2	6.5	6.8	7.2	6.4	7.3	7.6	7.9	8.3
	-10	2.9	3.3	3.5	3.6	3.8	3.5	4.0	4.2	4.4	4.6	4.2	4.8	5.0	5.2	5.5	5.0	5.7	5.9	6.2	6.5	5.9	6.6	6.9	7.3	7.6
	-5	2.5	2.9	3.0	3.2	3.4	3.1	3.6	3.7	3.9	4.1	3.8	4.3	4.5	4.8	5.0	4.6	5.2	5.4	5.7	6.0	5.4	6.1	6.4	6.7	7.0
	0	2.1	2.5	2.6	2.7	2.9	2.7	3.1	3.3	3.4	3.6	3.4	3.9	4.1	4.2	4.5	4.1	4.7	4.9	5.2	5.4	5.0	5.6	5.9	6.2	6.5
	5	1.5	1.7	1.8	1.9	2.0	2.0	2.3	2.5	2.6	2.7	2.7	3.0	3.2	3.4	3.5	3.4	3.8	4.0	4.2	4.4	4.1	4.7	4.9	5.2	5.4
	10	0.8	1.0	1.1	1.1	1.2	1.3	1.6	1.7	1.8	1.9	1.9	2.3	2.4	2.5	2.6	2.6	3.0	3.1	3.3	3.5	3.3	3.8	4.0	4.2	4.4
		VENR=130 KIAS					VENR=127 KIAS					VENR=124 KIAS					VENR=120 KIAS					VENR=116 KIAS				
1	-35	2.7	3.1	3.2	3.3	3.5	3.3	3.7	3.9	4.1	4.3	4.0	4.5	4.7	4.9	5.1	4.7	5.4	5.6	5.8	6.1	5.6	6.3	6.6	6.9	7.2
5	-30	2.2	2.6	2.7	2.8	2.9	2.8	3.2	3.4	3.5	3.7	3.5	4.0	4.1	4.3	4.5	4.2	4.8	5.0	5.2	5.4	5.0	5.7	5.9	6.2	6.5
0	-25	1.8	2.1	2.2	2.3	2.4	2.4	2.7	2.8	3.0	3.1	3.0	3.4	3.6	3.7	3.9	3.7	4.2	4.4	4.6	4.8	4.5	5.1	5.3	5.5	5.8
0	-20	1.4	1.6	1.7	1.8	1.9	1.9	2.2	2.3	2.5	2.6	2.6	2.9	3.0	3.2	3.3	3.2	3.7	3.8	4.0	4.2	4.0	4.5	4.7	4.9	5.2
0	-15	1.0	1.2	1.3	1.4	1.4	1.5	1.8	1.9	2.0	2.1	2.1	2.4	2.6	2.7	2.8	2.8	3.2	3.3	3.5	3.6	3.5	4.0	4.2	4.4	4.6
	-10	0.7	0.8	0.9	1.0	1.0	1.2	1.4	1.5	1.6	1.7	1.8	2.0	2.1	2.2	2.4	2.4	2.7	2.9	3.0	3.1	3.1	3.5	3.7	3.9	4.0
	-5	0.3	0.4	0.5	0.5	0.6	0.8	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8	1.9	2.0	2.3	2.4	2.5	2.7	2.7	3.1	3.2	3.4	3.5
	0	-0.1	-0.1	0.0	0.0	0.1	0.3	0.5	0.5	0.6	0.6	0.9	1.1	1.1	1.2	1.3	1.5	1.7	1.8	1.9	2.0	2.1	2.4	2.6	2.7	2.8
	5	-0.6	-0.6	-0.5	-0.5	-0.5	-0.1	-0.1	0.0	0.0	0.1	0.4	0.5	0.6	0.6	0.7	0.9	1.1	1.2	1.3	1.4	1.6	1.8	1.9	2.0	2.2
	10	-1.2	-1.2	-1.2	-1.2	-1.2	-0.8	-0.7	-0.7	-0.7	-0.7	-0.3	-0.2	-0.2	-0.2	-0.1	0.2	0.4	0.4	0.5	0.5	0.8	1.0	1.1	1.2	1.2
		VENR=129 KIAS					VENR=126 KIAS					VENR=122 KIAS					VENR=118 KIAS					VENR=115 KIAS				
2	-35	0.4	0.5	0.6	0.6	0.7	0.9	1.0	1.1	1.2	1.3	1.4	1.7	1.7	1.8	1.9	2.0	2.3	2.4	2.6	2.7	2.7	3.1	3.2	3.4	3.5
0	-30	0.0	0.1	0.1	0.2	0.2	0.5	0.6	0.7	0.7	0.8	1.0	1.2	1.3	1.3	1.4	1.6	1.8	1.9	2.0	2.1	2.3	2.6	2.7	2.8	3.0
0	-25	-0.4	-0.3	-0.3	-0.2	-0.2	0.1	0.2	0.2	0.3	0.3	0.6	0.8	0.8	0.9	1.0	1.2	1.4	1.5	1.6	1.6	1.8	2.1	2.2	2.3	2.4
0	-20	-0.8	-0.8	-0.8	-0.8	-0.8	-0.4	-0.3	-0.3	-0.3	-0.2	0.1	0.2	0.3	0.3	0.4	0.7	0.8	0.9	1.0	1.0	1.3	1.5	1.6	1.7	1.8
0	-15	-1.4	-1.5	-1.5	-1.5	-1.5	-1.0	-1.0	-1.0	-1.0	-1.0	-0.6	-0.5	-0.5	-0.5	-0.5	-0.1	0.0	0.1	0.1	0.2	0.5	0.7	0.7	0.8	0.9
	-10	-2.0	-2.0	-2.1	-2.1	-2.1	-1.6	-1.6	-1.6	-1.7	-1.7	-1.2	-1.2	-1.2	-1.2	-1.2	-0.7	-0.6	-0.6	-0.6	-0.6	-0.1	0.0	0.0	0.0	0.1
	-5	-2.5	-2.6	-2.7	-2.7	-2.7	-2.1	-2.2	-2.3	-2.3	-2.3	-1.7	-1.8	-1.8	-1.8	-1.9	-1.3	-1.3	-1.3	-1.3	-1.3	-0.8	-0.8	-0.7	-0.7	-0.7
	0	-2.9	-3.1	-3.1	-3.2	-3.2	-2.6	-2.7	-2.8	-2.8	-2.9	-2.2	-2.3	-2.3	-2.4	-2.4	-1.8	-1.9	-1.9	-1.9	-1.9	-1.3	-1.3	-1.4	-1.4	-1.4
	5	-3.4	-3.5	-3.6	-3.7	-3.7	-3.0	-3.2	-3.3	-3.3	-3.4	-2.7	-2.8	-2.9	-2.9	-3.0	-2.3	-2.4	-2.4	-2.5	-2.5	-1.9	-1.9	-1.9	-2.0	-2.0
	10	-3.8	-4.0	-4.1	-4.1	-4.2	-3.5	-3.7	-3.7	-3.8	-3.9	-3.2	-3.3	-3.4	-3.5	-3.5	-2.8	-2.9	-3.0	-3.1	-3.1	-2.4	-2.5	-2.5	-2.6	-2.6
		VENR=131 KIAS					VENR=128 KIAS					VENR=124 KIAS					VENR=120 KIAS					VENR=115 KIAS				
2	-35	-2.1	-2.2	-2.2	-2.3	-2.3	-1.8	-1.8	-1.8	-1.9	-1.9	-1.4	-1.4	-1.4	-1.4	-1.4	-0.9	-0.9	-0.9	-0.9	-0.9	-0.4	-0.4	-0.4	-0.3	-0.3
5	-30	-2.4	-2.5	-2.6	-2.6	-2.6	-2.1	-2.1	-2.2	-2.2	-2.2	-1.7	-1.7	-1.8	-1.8	-1.8	-1.3	-1.3	-1.3	-1.3	-1.3	-0.8	-0.8	-0.7	-0.7	-0.7
0	-25	-2.8	-2.9	-3.0	-3.0	-3.1	-2.5	-2.6	-2.6	-2.7	-2.7	-2.1	-2.2	-2.2	-2.3	-2.3	-1.7	-1.8	-1.8	-1.8	-1.8	-1.2	-1.2	-1.2	-1.2	-1.3
0	-20	-3.3	-3.4	-3.5	-3.5	-3.6	-2.9	-3.1	-3.1	-3.2	-3.3	-2.6	-2.7	-2.8	-2.8	-2.9	-2.2	-2.3	-2.3	-2.4	-2.4	-1.8	-1.8	-1.8	-1.9	-1.9
0	-15	-3.7	-3.9	-4.0	-4.0	-4.1	-3.4	-3.6	-3.6	-3.7	-3.8	-3.1	-3.2	-3.3	-3.4	-3.4	-2.7	-2.9	-2.9	-3.0	-3.0	-2.3	-2.4	-2.5	-2.5	-2.5
	-10	-4.1	-4.3	-4.4	-4.4	-4.5	-3.8	-4.0	-4.1	-4.1	-4.2	-3.5	-3.7	-3.7	-3.8	-3.9	-3.2	-3.3	-3.4	-3.4	-3.5	-2.8	-2.9	-3.0	-3.0	-3.1
	-5	-4.4	-4.7	-4.7	-4.8	-4.9	-4.2	-4.4	-4.5	-4.6	-4.7	-3.9	-4.1	-4.2	-4.3	-4.3	-3.6	-3.8	-3.8	-3.9	-4.0	-3.2	-3.4	-3.5	-3.5	-3.6
	0	-4.8	-5.0	-5.1	-5.2	-5.3	-4.5	-4.8	-4.9	-5.0	-5.1	-4.3	-4.5	-4.6	-4.7	-4.8	-4.0	-4.2	-4.3	-4.4	-4.5	-3.6	-3.9	-3.9	-4.0	-4.1
	1	-4.8	-5.1	-5.2	-5.3	-5.4	-4.6	-4.9	-5.0	-5.1	-5.2	-4.4	-4.6	-4.7	-4.8	-4.9	-4.1	-4.3	-4.4	-4.5	-4.6	-3.8	-4.0	-4.1	-4.1	-4.2

525AFM-06-00

Figure 4-43 (Sheet 2)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS 12375 WIND KNOTS −10	0	10	20	30	12200 WIND KNOTS −10	0	10	20	30	12000 WIND KNOTS −10	0	10	20	30	11500 WIND KNOTS −10	0	10	20	30	11000 WIND KNOTS −10	0	10	20	30
		VENR=150 KIAS					VENR=149 KIAS					VENR=147 KIAS					VENR=143 KIAS					VENR=139 KIAS				
3	−35	−4.6	−4.8	−4.9	−4.9	−5.0	−4.5	−4.7	−4.8	−4.9	−5.0	−4.4	−4.6	−4.7	−4.8	−4.9	−4.2	−4.4	−4.5	−4.6	−4.7	−4.0	−4.2	−4.3	−4.4	−4.4
0	−30	−4.8	−5.1	−5.1	−5.2	−5.3	−4.8	−5.0	−5.1	−5.2	−5.3	−4.7	−4.9	−5.0	−5.1	−5.2	−4.5	−4.7	−4.8	−4.9	−5.0	−4.3	−4.5	−4.6	−4.7	−4.8
0	−25	−5.1	−5.4	−5.4	−5.5	−5.6	−5.1	−5.3	−5.4	−5.5	−5.6	−5.0	−5.2	−5.3	−5.4	−5.5	−4.8	−5.0	−5.1	−5.2	−5.3	−4.6	−4.8	−4.9	−5.0	−5.1
0	−20	−5.4	−5.6	−5.7	−5.8	−5.9	−5.3	−5.6	−5.7	−5.8	−5.9	−5.3	−5.5	−5.6	−5.7	−5.8	−5.1	−5.3	−5.4	−5.5	−5.6	−4.9	−5.1	−5.2	−5.3	−5.4
0	−15	−5.6	−5.9	−6.0	−6.1	−6.2	−5.6	−5.8	−5.9	−6.0	−6.1	−5.5	−5.8	−5.9	−6.0	−6.1	−5.4	−5.6	−5.7	−5.8	−5.9	−5.2	−5.5	−5.5	−5.6	−5.7
	−10	−5.9	−6.2	−6.3	−6.4	−6.5	−5.8	−6.1	−6.2	−6.3	−6.4	−5.8	−6.1	−6.2	−6.3	−6.4	−5.6	−5.9	−6.0	−6.1	−6.2	−5.5	−5.8	−5.8	−6.0	−6.1
	−9	−5.9	−6.2	−6.3	−6.4	−6.5	−5.9	−6.2	−6.3	−6.4	−6.5	−5.8	−6.1	−6.2	−6.3	−6.4	−5.7	−6.0	−6.1	−6.2	−6.3	−5.5	−5.8	−5.9	−6.0	−6.1
		VENR=153 KIAS					VENR=153 KIAS					VENR=151 KIAS					VENR=147 KIAS					VENR=143 KIAS				
3	−35	−5.6	−5.8	−5.9	−6.0	−6.1	−5.5	−5.8	−5.8	−5.9	−6.0	−5.5	−5.7	−5.8	−5.9	−6.0	−5.3	−5.6	−5.6	−5.7	−5.8	−5.2	−5.4	−5.5	−5.6	−5.7
5	−30	−5.8	−6.0	−6.1	−6.2	−6.3	−5.7	−6.0	−6.1	−6.2	−6.3	−5.7	−5.9	−6.0	−6.1	−6.2	−5.6	−5.8	−5.9	−6.0	−6.1	−5.4	−5.7	−5.8	−5.8	−5.9
0	−25	−6.0	−6.3	−6.3	−6.4	−6.5	−6.0	−6.2	−6.3	−6.4	−6.5	−5.9	−6.2	−6.3	−6.4	−6.5	−5.8	−6.1	−6.1	−6.2	−6.3	−5.7	−5.9	−6.0	−6.1	−6.2
0	−20	−6.2	−6.5	−6.6	−6.7	−6.8	−6.2	−6.4	−6.5	−6.6	−6.7	−6.1	−6.4	−6.5	−6.6	−6.7	−6.0	−6.3	−6.4	−6.5	−6.6	−5.9	−6.2	−6.3	−6.4	−6.5
0																										
		VENR=159 KIAS					VENR=157 KIAS					VENR=156 KIAS					VENR=151 KIAS					VENR=147 KIAS				
4	−35	−6.3	−6.6	−6.6	−6.7	−6.8	−6.3	−6.5	−6.6	−6.7	−6.8	−6.3	−6.5	−6.6	−6.7	−6.8	−6.2	−6.4	−6.5	−6.6	−6.7	−6.1	−6.3	−6.4	−6.5	−6.6
0	−30	−6.5	−6.7	−6.8	−6.9	−7.0	−6.5	−6.7	−6.8	−6.9	−7.0	−6.4	−6.7	−6.8	−6.9	−7.0	−6.3	−6.6	−6.7	−6.8	−6.9	−6.3	−6.5	−6.6	−6.7	−6.8
0	−25	−6.7	−6.9	−7.0	−7.1	−7.2	−6.6	−6.9	−7.0	−7.1	−7.2	−6.6	−6.9	−6.9	−7.0	−7.1	−6.5	−6.8	−6.9	−7.0	−7.1	−6.4	−6.7	−6.8	−6.9	−7.0
0	−22	−6.7	−7.0	−7.1	−7.2	−7.3	−6.7	−7.0	−7.1	−7.2	−7.3	−6.7	−7.0	−7.0	−7.1	−7.2	−6.6	−6.9	−7.0	−7.1	−7.2	−6.6	−6.8	−6.9	−7.0	−7.1
0																										
		VENR=164 KIAS					VENR=163 KIAS					VENR=161 KIAS					VENR=156 KIAS					VENR=152 KIAS				
4	−35	−6.7	−6.9	−7.0	−7.1	−7.2	−6.7	−6.9	−7.0	−7.1	−7.2	−6.7	−6.9	−7.0	−7.1	−7.1	−6.6	−6.9	−6.9	−7.0	−7.1	−6.6	−6.8	−6.9	−7.0	−7.1
5	−30	−6.8	−7.1	−7.1	−7.2	−7.3	−6.8	−7.1	−7.1	−7.2	−7.3	−6.8	−7.0	−7.1	−7.2	−7.3	−6.8	−7.0	−7.1	−7.2	−7.3	−6.7	−6.9	−7.0	−7.1	−7.2
0	−25	−7.0	−7.2	−7.3	−7.4	−7.4	−7.0	−7.2	−7.3	−7.4	−7.4	−6.9	−7.2	−7.3	−7.3	−7.4	−6.9	−7.1	−7.2	−7.3	−7.4	−6.9	−7.1	−7.2	−7.3	−7.4
0	−22	−7.0	−7.3	−7.4	−7.4	−7.5	−7.0	−7.3	−7.4	−7.4	−7.5	−7.0	−7.3	−7.3	−7.4	−7.5	−7.0	−7.2	−7.3	−7.4	−7.5	−6.9	−7.2	−7.3	−7.4	−7.5
0																										

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Figure 4-43 (Sheet 3)

SINGLE ENGINE ENROUTE NET CLIMB GRADIENT - PERCENT
FLAPS - UP

CONDITIONS: **ANTI-ICE SYSTEMS - ON**
LANDING GEAR - UP
AIRSPEED - VENR
SPEEDBRAKES - RETRACT
INOPERATIVE ENGINE- WINDMILLING
OPERATIVE ENGINE - MAXIMUM CONTINUOUS THRUST

ALT FT	TEMP DEG C	WEIGHT - POUNDS																	
		10500					10000					9500					9000					8500				
		WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS					WIND KNOTS				
		-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30	-10	0	10	20	30
		VENR=135 KIAS					VENR=132 KIAS					VENR=128 KIAS					VENR=124 KIAS					VENR=120 KIAS				
3	-35	-3.8	-4.0	-4.0	-4.1	-4.2	-3.5	-3.7	-3.8	-3.8	-3.9	-3.2	-3.4	-3.4	-3.5	-3.6	-2.9	-3.0	-3.1	-3.1	-3.2	-2.5	-2.6	-2.7	-2.7	-2.8
0	-30	-4.1	-4.3	-4.4	-4.4	-4.5	-3.8	-4.0	-4.1	-4.2	-4.2	-3.5	-3.7	-3.8	-3.8	-3.9	-3.2	-3.4	-3.4	-3.5	-3.6	-2.9	-3.0	-3.1	-3.1	-3.2
0	-25	-4.4	-4.6	-4.7	-4.8	-4.9	-4.1	-4.4	-4.4	-4.5	-4.6	-3.9	-4.1	-4.1	-4.2	-4.3	-3.6	-3.7	-3.8	-3.9	-3.9	-3.2	-3.4	-3.4	-3.5	-3.6
0	-20	-4.7	-4.9	-5.0	-5.1	-5.2	-4.5	-4.7	-4.8	-4.9	-5.0	-4.2	-4.4	-4.5	-4.6	-4.7	-3.9	-4.1	-4.2	-4.3	-4.4	-3.6	-3.8	-3.9	-3.9	-4.0
0	-15	-5.0	-5.3	-5.3	-5.4	-5.5	-4.8	-5.0	-5.1	-5.2	-5.3	-4.6	-4.8	-4.9	-5.0	-5.1	-4.3	-4.5	-4.6	-4.7	-4.8	-4.0	-4.2	-4.3	-4.4	-4.4
	-10	-5.3	-5.6	-5.7	-5.8	-5.9	-5.1	-5.4	-5.5	-5.6	-5.7	-4.9	-5.1	-5.2	-5.3	-5.4	-4.6	-4.9	-5.0	-5.1	-5.2	-4.4	-4.6	-4.7	-4.8	-4.9
	-9	-5.4	-5.6	-5.7	-5.8	-5.9	-5.2	-5.4	-5.5	-5.6	-5.7	-4.9	-5.2	-5.3	-5.4	-5.5	-4.7	-5.0	-5.0	-5.1	-5.2	-4.4	-4.7	-4.8	-4.9	-4.9
		VENR=139 KIAS					VENR=135 KIAS					VENR=131 KIAS					VENR=126 KIAS					VENR=121 KIAS				
3	-35	-5.0	-5.2	-5.3	-5.4	-5.5	-4.8	-5.1	-5.1	-5.2	-5.3	-4.6	-4.9	-4.9	-5.0	-5.1	-4.4	-4.6	-4.7	-4.8	-4.9	-4.1	-4.3	-4.4	-4.5	-4.6
5	-30	-5.3	-5.5	-5.6	-5.7	-5.8	-5.1	-5.3	-5.4	-5.5	-5.6	-4.9	-5.1	-5.2	-5.3	-5.4	-4.7	-4.9	-5.0	-5.1	-5.2	-4.4	-4.6	-4.7	-4.8	-4.9
0	-25	-5.5	-5.8	-5.9	-6.0	-6.1	-5.4	-5.6	-5.7	-5.8	-5.9	-5.2	-5.4	-5.5	-5.6	-5.7	-5.0	-5.2	-5.3	-5.4	-5.5	-4.7	-4.9	-5.0	-5.1	-5.2
0	-20	-5.8	-6.0	-6.1	-6.2	-6.3	-5.6	-5.9	-6.0	-6.1	-6.2	-5.4	-5.7	-5.8	-5.9	-6.0	-5.2	-5.5	-5.6	-5.7	-5.8	-5.0	-5.3	-5.3	-5.4	-5.5
0																										
		VENR=143 KIAS					VENR=139 KIAS					VENR=134 KIAS					VENR=130 KIAS					VENR=125 KIAS				
4	-35	-5.9	-6.2	-6.3	-6.4	-6.5	-5.8	-6.1	-6.2	-6.3	-6.3	-5.7	-5.9	-6.0	-6.1	-6.2	-5.5	-5.8	-5.9	-5.9	-6.0	-5.3	-5.6	-5.7	-5.8	-5.9
0	-30	-6.1	-6.4	-6.5	-6.6	-6.7	-6.0	-6.3	-6.4	-6.5	-6.6	-5.9	-6.2	-6.2	-6.3	-6.4	-5.7	-6.0	-6.1	-6.2	-6.3	-5.6	-5.8	-5.9	-6.0	-6.1
0	-25	-6.4	-6.6	-6.7	-6.8	-6.9	-6.2	-6.5	-6.6	-6.7	-6.8	-6.1	-6.4	-6.5	-6.6	-6.7	-6.0	-6.2	-6.3	-6.4	-6.5	-5.8	-6.1	-6.2	-6.3	-6.4
0	-22	-6.5	-6.7	-6.8	-6.9	-7.0	-6.4	-6.6	-6.7	-6.8	-6.9	-6.2	-6.5	-6.6	-6.7	-6.8	-6.1	-6.4	-6.5	-6.6	-6.7	-6.0	-6.2	-6.3	-6.4	-6.5
0																										
		VENR=147 KIAS					VENR=143 KIAS					VENR=139 KIAS					VENR=134 KIAS					VENR=129 KIAS				
4	-35	-6.5	-6.7	-6.8	-6.9	-7.0	-6.4	-6.7	-6.7	-6.8	-6.9	-6.3	-6.6	-6.7	-6.7	-6.8	-6.2	-6.5	-6.5	-6.6	-6.7	-6.1	-6.3	-6.4	-6.5	-6.6
5	-30	-6.6	-6.9	-7.0	-7.1	-7.2	-6.6	-6.8	-6.9	-7.0	-7.1	-6.5	-6.7	-6.8	-6.9	-7.0	-6.4	-6.6	-6.7	-6.8	-6.9	-6.3	-6.5	-6.6	-6.7	-6.8
0	-25	-6.8	-7.0	-7.1	-7.2	-7.3	-6.7	-7.0	-7.1	-7.2	-7.3	-6.7	-6.9	-7.0	-7.1	-7.2	-6.6	-6.8	-6.9	-7.0	-7.1	-6.5	-6.7	-6.8	-6.9	-7.0
0	-22	-6.9	-7.1	-7.2	-7.3	-7.4	-6.8	-7.1	-7.2	-7.3	-7.4	-6.8	-7.0	-7.1	-7.2	-7.3	-6.7	-6.9	-7.0	-7.1	-7.2	-6.6	-6.8	-6.9	-7.0	-7.1
0																										

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Figure 4-43 (Sheet 4)