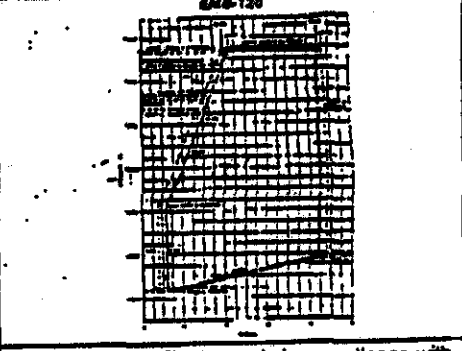
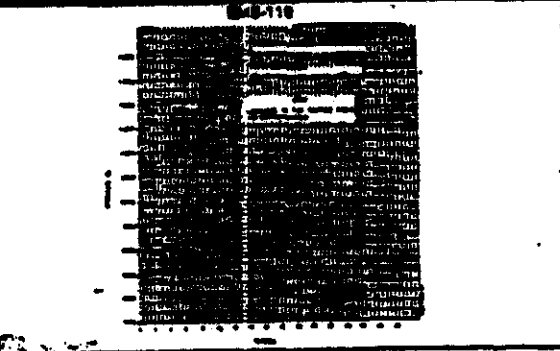
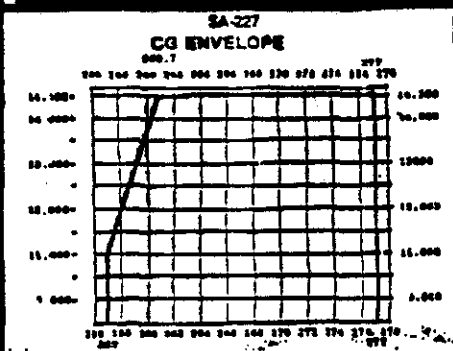


**USA**  
 P.O. Box 73021  
 Greater Cincinnati International Airport  
 Cincinnati, Ohio 45276

EMB-110   
 EMB-120   
 CHECK ONE  
**LOAD MANIFEST**

FL # \_\_\_\_\_ From: CLE To: DTW  
 Operator: D. CARLSEN K. ROODE  
 PM: D. OLSEN

BASIC OPERATING WEIGHT		46864
ACM (EMB-120 ONLY)		
PASSENGERS: ADULTS #	254	250
CHILDREN #		
BAGGAGE: 34 <del>33</del> BAGS	799	
	PRT & COMAT	10
FUEL:		809
TAKEOFF GROSS WEIGHT:		24747
ADJUSTMENTS		



LOADING SCHEDULE	MAXIMUM T/O WEIGHT	ALT: <u>CLE</u>	VPR ETE	ALT: _____
<u>25</u>	<u>25353</u>	T/O ALT: _____	ROUTE OF FLIGHT: _____	

I certify that this flight crew is in compliance with  
 Captain Ops Manual re: crew qualifications and  
 recommend the aircraft is loaded in accordance with  
 the approved loading schedule.  
 Captain [Signature]

PASSENGERS			BAGGAGE			PAYLOAD CONVERSION								
#	SUM	WTR	#	WT	#	WT	PAYLOAD	WINTER PAY/BAG	PAYLOAD	WINTER PAY/BAG	PAYLOAD	WINTER PAY/BAG	PAYLOAD	WINTER PAY/BAG
1	185	170	1	24	27	635	3700	18-24	3100	18-18	3700	18-20	3000	18-11
2	330	340	2	47	25	658	3880	18-23	3080	18-18	3680	18-19	2980	18-18
3	485	510	3	71	29	692	3980	18-21	3060	18-17	3640	18-17	2960	18-17
4	560	600	4	94	30	705	3840	18-22	3040	18-17	3620	18-16	2940	18-16
5	825	850	5	118	31	729	3620	18-20	3020	18-16	3600	18-15	2920	18-15
6	990	1020	6	141	32	752	3600	18-18	3000	18-15	3580	18-14	2900	18-14
7	1155	1190	7	165	33	776	3580	18-18	2980	18-15	3560	18-14	2880	18-14
8	1320	1360	8	188	34	799	3560	18-18	2960	18-20	3540	18-13	2860	18-13
9	1485	1530	9	212	35	823	3540	18-17	2940	18-18	3520	18-12	2840	18-12
10	1650	1700	10	235	36	846	3520	18-18	2920	18-18	3500	18-11	2820	18-11
11	1815	1870	11	259	37	870	3500	18-15	2900	18-18	3480	18-10	2800	18-10
12	1980	2040	12	282	38	893	3480	18-14	2880	18-17	3460	18-10	2780	18-10
13	2145	2210	13	306	38	917	3460	18-20	2860	18-18	3440	18-18	2760	18-18
14	2310	2380	14	329	40	940	3440	18-20	2840	18-15	3420	18-15	2740	18-15
15	2475	2550	15	353	41	964	3420	18-18	2820	18-14	3400	18-14	2720	18-14
16	2640	2720	16	376	42	987	3400	18-18	2800	18-20	3380	18-13	2700	18-13
17	2805	2890	17	400	43	1011	3380	18-17	2780	18-20	3360	18-13	2680	18-12
18	2970	3080	18	423	44	1034	3360	17-23	2760	14-18	3340	17-18	2660	14-11
19	3135	3230	19	447	45	1058	3340	17-22	2740	18-18	3320	17-18	2640	18-11
20	3300	3400	20	470	46	1081	3320	17-21	2720	18-17	3300	17-17	2620	18-11
21	3465	3570	21	494	47	1105	3300	17-21	2700	18-18	3280	17-16	2600	18-16
22	3630	3740	22	517	48	1128	3280	17-20	2680	18-15	3260	17-13	2580	18-15
23	3795	3810	23	541	49	1152	3260	17-19	2660	18-14	3180	18-19	2560	18-14
24	3960	4080	24	564	50	1175	3240	17-18	2640	18-14	3160	18-18	2540	18-14
25	4125	4250	25	588	51	1199	3220	17-17	2620	13-20	3140	18-17	2520	18-13
26	4290	4420	26	611			3200	17-16	2600	13-19	3120	18-17	2500	18-12
27	4455	4590					3180	18-22	2580	13-18	3100	18-16		
28	4620	4760					3160	18-21	2560	13-17	3080	18-15		
29	4785	4930					3140	18-21	2540	13-18	3060	18-14		
30	4950	5100					3120	18-20	2520	13-15	3040	18-13		
									2500	13-15	3020	18-12		

**EMB-120**  
Aircraft Fuel Load Weight & Balance Data

Fuel Weight	Moment Arm	Total Fuel Moment/1000
1000	348.3	558.9
1600	348.3	628.7
2000	348.1	698.2
2200	348.0	767.8
2400	348.8	837.4
2600	348.7	906.6
2800	348.6	976.1
3000	348.4	1045.2
3200	348.3	1114.6
3400	348.3	1184.2
3600	348.2	1253.5
3800	348.2	1323.2
4000	348.2	1392.8
4200	348.2	1462.4
4400	348.2	1532.1
4600	348.2	1601.7
4800	348.3	1671.8
5000	348.4	1742.0
5200	348.4	1811.7
5400	348.5	1881.9
5600	348.6	1952.2
5700	348.7	2022.5

Interpolated fuel  
@ 2900# - ARM 348.5

FAA APPROVED - 60 FS00.  
DATE 11-20-93  
POI VA-1

EMB-120 Longform Weight and Balance Worksheet  
Crew and Equipment

	STANDARD Weight Arm MOM	NON - STANDARD Weight Arm Factor MOM
Pilots	240 129.7 31.1	X 129.9 X .001=
F/A	120 177.2 21.3	X 177.2 X .001=
Crew Bags	30 166.9 5.0	X 166.9 X .001=
F/A Bag	22 202.0 4.4	X 202.0 X .001=
Lav.Chem.	18 186.6 3.4	X 186.6 X .001=
Galley	22 216.9 4.8	X 216.9 X .001=
Jump Seat		X 165.4 X .001=
<b>TOTALS</b>	<b>620 97.5</b>	

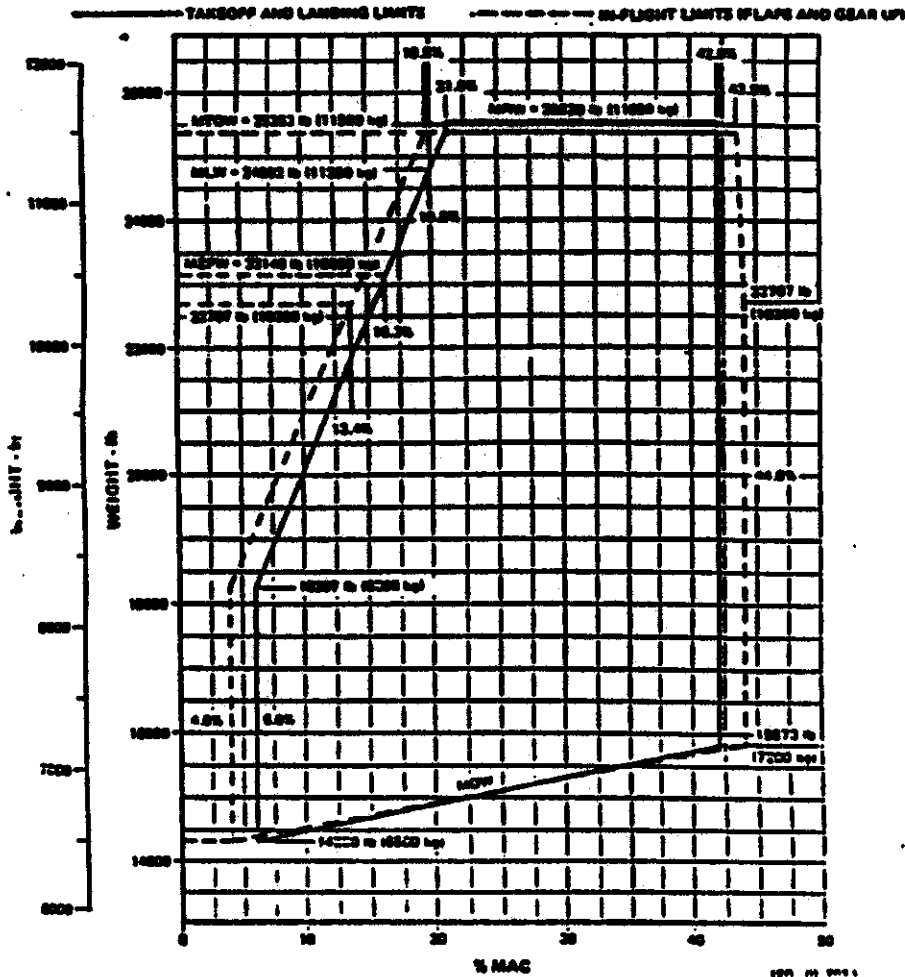
Fuel, Baggage/Cargo Weights & Moments

	Cargo Wt.	Arm	Factor	Moment
Compartment 1		X 559.1	X .001=	
Compartment 2 (max.570)		X 610.2	X .001=	
Compartment 1 & 2	809	X 578.0	X .001=	467.60
<b>TOTAL CARGO WT.</b> (MAX.1213)	<b>809</b>			<b>467.60</b>
<b>TOTAL FUEL</b> (at Takeoff)	<b>2874</b>	X Arm	X .001=	<b>1010.65</b>
			(from Table)	

	Weight	Moment	
Aircraft BW	14244	5270.85	
Crew & Equip.	620	97.50	
Passenger	4250	1508.25	
Bags & Cargo	809	467.60	
<b>Fuel Subtotal</b> (MFW=23,148)	<b>21923</b>	<b>7424.10</b>	
<b>Total Fuel @</b> <b>Takeoff</b>	<b>2874</b>	<b>1010.65</b>	
<b>Total Weight</b> (not greater than MTOW of):	<b>24797</b>	<b>8434.85</b>	
<b>TOTAL MOMENT</b>			X 1,000 = C.G.
<b>TOTAL WEIGHT</b>	<b>8434.85</b>		X 1,000 = <b>340.16</b>
<b>C.G. - LEMAC</b>			X 100 = <b>MAC</b>
	<b>340.16</b>	<b>-314.45</b>	
	<b>78.74</b>		X 100 = <b>32.65 MAC</b>
Check & MAC in limits use Elev. Trim Table. TRIM SETTING: <input type="text"/>			

FAA APPROVED  
DATE 11-23-93  
POI VA-1

CENTER OF GRAVITY LIMITS



FAA APPROVED - 80 FSDO  
 DATE 11-30-93  
 POI *[Signature]*

EMB-120 PASSENGER SEATING WORKSHEET

ROW	WEIGHT	MOMENT ARM	FACTOR	ROW MOM 1000
170	170	X 227.7	X .001 =	38.71
170	170	X 256.7	X .001 =	43.64
170	340	X 257.7	X .001 =	87.62
170	170	X 286.7	X .001 =	48.74
170	340	X 287.7	X .001 =	97.82
170	170	X 317.7	X .001 =	54.01
170	170	X 318.7	X .001 =	54.18
170	170	X 348.7	X .001 =	59.28
170	340	X 349.7	X .001 =	118.90
170	170	X 382.7	X .001 =	65.06
170	340	X 380.7	X .001 =	129.44
170	170	X 415.7	X .001 =	70.67
170	340	X 411.7	X .001 =	139.98
170	170	X 448.7	X .001 =	76.28
170	170	X 461.7	X .001 =	78.49
170	170	X 481.7	X .001 =	81.89
170	340	X 491.7	X .001 =	167.18
170	170	X 515.7	X .001 =	87.67
170	170	X 521.7	X .001 =	88.69

TOTAL PASSENGER WEIGHT

4150

TOTAL MOMENT

1588.25

FAA APPROVED - 80 FSDO  
 DATE 11-30-93  
 POI *[Signature]*

AIRCRAFT S/N 1257

# COMAIR

## WEIGHT AND BALANCE RECORD

**SA227AC**

B.O.W. \_\_\_\_\_ (LBS.)    B.O.W. MOMENT/1000 \_\_\_\_\_

C.G. \_\_\_\_\_ (IN.)  
 Note: C.G. must fall between  
 258.6 and 261.0 inches.

Fixed ballast of \_\_\_\_\_ lbs was installed at sta. \_\_\_\_\_ (in)  
 to adjust C.G. to within loading schedule limits.

**EMB120RT**

B.E.W. 16243.08 (LBS.)    B.E.W. MOMENT/1000 5270485.01

C.G. 12.73 (+ M.A.C.)

Fixed ballast of 0 lbs was installed at sta. 0 (in)  
 to adjust C.G. to within loading schedule limits.

*C.G. Limit 76 MM*

*11.66 - 14.20*

**SAAB 340A**

(LBS.)    B.O.W. INDEX \_\_\_\_\_

**CANADAIR CL-65**

(LBS.)    B.O.W. INDEX \_\_\_\_\_

[Signature]    Date 11-13-95

This form has been superseded by recomputation of the aircraft weight and balance.

Signed \_\_\_\_\_    Date \_\_\_\_\_

**COMAIR  
EMB-120RT  
WEIGHT AND CENTER OF GRAVITY ANALYSIS  
FLIGHT 3272 - JANUARY 9, 1997**

**LOAD MAINFEST**

**BASIC EMPTY WEIGHT** **16244**

**C.G. % OF MAC** **12.73**

Flight Crew	340
Flight Attendant	130
Flight Crew Overnight Bags	30
Flight Attendant Overnight Bag	15
Toilet Chemicals	15
Galley Supplies	90

**BASIC OPERATING WEIGHT** **16864**

Additional Crew Member 0

**ADJUSTED BASIC OPERATING WEIGHT** **16864**

Baggage / Cargo / Ballast		
	Checked Bags (#)	34
	Carry-On Bags (Pink Tag) (#)	0
	Freight / COMAT / Ballast (lbs.)	10      809

Passengers (See PASSENGERS Page)	(#)	25	4250
		+ 1 BIA	

**ACTUAL ZERO FUEL WEIGHT** **21923**

Takeoff Fuel			
	Total Fuel	2874	
	Outbound Taxi Fuel	0	2874

**TAKEOFF GROSS WEIGHT** **24797**

C.G. =	339.2
%MAC =	31

**COMAIR  
 EMB-120RT  
 WEIGHT AND CENTER OF GRAVITY ANALYSIS  
 FLIGHT 3272 - JANUARY 9, 1997**

**PASSENGERS**

ROW	A	B	C	D
1	N/A	170	0	N/A
2	170	170	170	N/A
3	170	170	170	N/A
4	170	170	0	N/A
5	170	170	170	N/A
6	170	170	170	N/A
7	170	170	170	N/A
8	170	170	0	N/A
9	170	170	170	N/A
10	170	0	170	0

Total Passengers 25

Total Passenger Weight 4250

Total Passenger Moment 1574.46

**COMAIR  
EMB-120RT  
WEIGHT AND CENTER OF GRAVITY ANALYSIS  
FLIGHT 3272 - JANUARY 9, 1997**

**ESTIMATED LOAD MAINFEST - LANDING (1000 LB. FUEL BURN)**

**BASIC EMPTY WEIGHT** **16244**

**C.G. % OF MAC** **12.73**

Flight Crew	340
Flight Attendant	130
Flight Crew Overnight Bags	30
Flight Attendant Overnight Bag	15
Toilet Chemicals	15
Galley Supplies	90

**BASIC OPERATING WEIGHT** **16864**

Additional Crew Member 0

**ADJUSTED BASIC OPERATING WEIGHT** **16864**

Baggage / Cargo / Ballast		
	Checked Bags (#)	34
	Carry-On Bags (Pink Tag) (#)	0
	Freight / COMAT / Ballast (lbs.)	10      809

Passengers (See PASSENGERS Page)	(#)	25	4250
		+ 1 BIA	

**ACTUAL ZERO FUEL WEIGHT** **21923**

Takeoff Fuel		Total Fuel	1874
		Outbound Taxi Fuel	0      1874

**TAKEOFF GROSS WEIGHT** **23797**

C.G. =	338.9
%MAC =	31

**COMAIR  
EMB-120RT  
WEIGHT AND CENTER OF GRAVITY ANALYSIS  
FLIGHT 3272 - JANUARY 9, 1997**

**PASSENGERS**

ROW	A	B	C	D
1	N/A	170	0	N/A
2	170	170	170	N/A
3	170	170	170	N/A
4	170	170	0	N/A
5	170	170	170	N/A
6	170	170	170	N/A
7	170	170	170	N/A
8	170	170	0	N/A
9	170	170	170	N/A
10	170	0	170	0

Total Passengers 25

Total Passenger Weight 4250

Total Passenger Moment 1574.46



# COMAIR EMB-120RT WEIGHT AND CENTER OF GRAVITY ANALYSIS FLIGHT 3272 - JANUARY 9, 1997

## ESTIMATED CENTER OF GRAVITY GRAPH - LANDING (1000 LB. FUEL BURN)

