PART 10 - RUNWAY LIMITATION TABLES

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

Under request EADS-CASA may produce customized Runway Limitation Tables to be included in Performace Data Manual. These runway tables may be used by the crews operating the aircraft to read takeoff parameters of some airfields in a simple, accurate and quick way. A sample of these table is available on Figure 10-2.

The Runway Limitation Tables give the Maximum Take-Off Weight (MTOW) at brake release for each runway, as a function of airfield ambient temperature and headwind component.

The weights shown on the tables are performance limited and in many cases exceed the structural limit. In that way is avoided undue weight penalization when applying the required corrections for different ambient or airport conditions.

The maximum structural weight at brake release is printed on the tables and must be observed when dispatching the airplane.

These tables also give the take-off speeds (V_1, V_R and V_2) and a limitation code associated with MTOW for each airfield ambient temperature and headwind component.

LIMITATION CODES

The reasons of limitations are codified with the following numbers:

Blank Structural

1 Runway length limitation.

2 Second segment limitation.

3 Brake energy limit.

4 Obstacle clearance limitation.

The minimum second segment climb gradient is usually set at 1.6%.

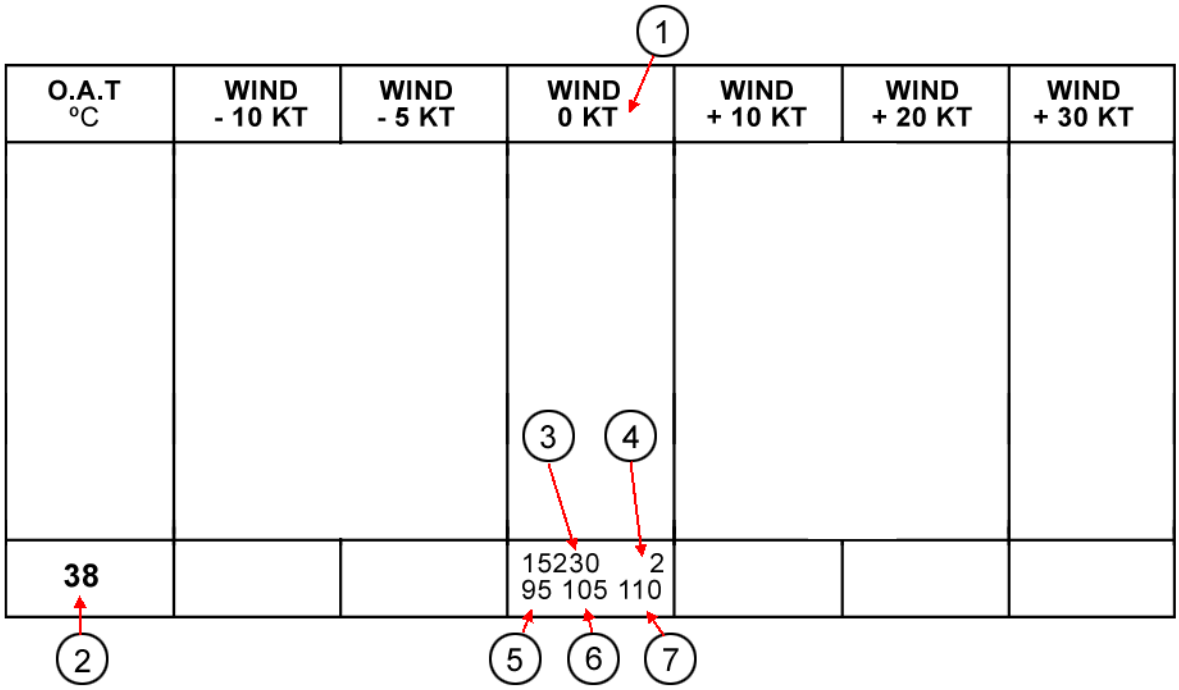
Checking of obstacle clearance has been calculated with a clearance of 35 ft.

MAXIMUM TAKEOFF WEIGHT DETERMINATION

Enter in the upper part of the column corresponding to the reported wind and proceed downwards to find a box with temperature equal to the actual ambient temperature (OAT). In this box read the MTOW and associated take-off speeds.

When the OAT value or the reported wind value lies between two values of the table, the MTOW and take-off speeds have to be interpolated.

Corrections for QNH = 1013 mb and wet runway for takeoff weight and V_1 have to be made, when applicable.



(1) Wind velocity - Knots

(2) Outside Air Temperature - ºC

(3) Maximum Takeoff Weight - Kg

(4) Limitations Code

(5) V_1 Decision Speed - KIAS

(6) V_R Rotation Speed - KIAS

(7) V_2 Climb - out Speed - KIAS

15-A-156946-C-0117B-00001-A-01-1IÉò

Figure 10-1 Limitation Codes

SAMPLE

RUNWAY (ft)	SLOPE (%)	STOPWAY (ft)	CLEARWAY (ft)	FLAP
4701	+ 0.50	0	0	10°

ELEVATION : 47 ft

MAX STRUCTURAL : _____ kg

O.A.T. °C	WIND – 10 KT	WIND 0 KT	WIND + 10 KT	WIND + 20 KT	WIND + 30 KT
10	15480 1 95 106 111	17000 103 111 116	17000 105 111 116	17000 108 111 116	17000 110 111 116
15	15290 1 95 105 110	16890 1 103 110 116	17000 104 111 116	17000 107 111 116	17000 109 111 116
20	15100 1 94 104 109	16670 1 102 110 115	17000 104 111 116	17000 106 111 116	17000 109 111 116
25	14910 1 93 104 109	16460 1 101 109 114	16910 2 104 110 116	16910 2 106 110 116	16910 2 108 110 116
30	14710 1 92 103 108	16250 1 101 108 113	16680 2 103 110 115	16680 2 105 110 115	16680 2 108 110 115
35	14550 1 92 102 107	16080 1 100 108 113	16490 2 103 109 114	16490 2 105 109 114	16490 2 107 109 114
40	14210 1 91 101 106	15710 1 99 106 111	15910 2 101 107 112	15910 2 104 107 112	15910 2 106 107 112
42	14100 1 91 101 106	15580 1 99 106 111	15710 2 101 106 111	15710 2 103 106 111	15710 2 106 106 111
44	13990 1 90 100 105	15470 1 99 106 111	15510 2 100 106 111	15510 2 103 106 111	15510 2 105 106 111
46	13860 1 90 100 105	15310 2 98 105 110	15310 2 100 105 110	15310 2 103 105 110	15310 2 105 105 110
48	13720 1 90 99 104	15120 2 98 104 109	15120 2 100 104 109	15120 2 102 104 109	15120 2 104 104 109
50	13590 1 89 99 104	14920 2 97 104 109	14920 2 99 104 109	14920 2 102 104 109	14920 2 104 104 109
52	13460 1 89 99 103	14710 2 97 103 108	14710 2 99 103 108	14710 2 101 103 108	14710 2 103 103 108
54	13340 1 88 98 103	14520 2 96 102 107	14520 2 98 102 107	14520 2 101 102 107	14520 2 102 102 107
WET CORR.	-500 Kg -6 Kt	-500 Kg -5 Kt	-400 Kg -3 Kt	0 Kg -2 Kt	0 Kg 0 Kt

CAUTION: Figures on the table are not applicable for C-295 M aircraft. It is only to show an example

QNH CORRECTION
QNH > 1013 : + 12 kg/mb
QNH < 1013 : – 20 kg/mb

MTOW LIMITATION CODE
V_1(IAS) V_R(IAS) V_2(IAS)

BLANK: STRUCTURAL
1: RUNWAY
2: 2ND SEGMENT
3: BRAKE ENERGY
4: OBSTACLE

15-A-156942-C-0117B-00002-A-01-1IÉò

Figure 10-2 Runway Limitation Table - Sample

CUSTOMIZED RUNWAY LIMITATION TABLES

RECORD

Nr.	TITLE	APPLICABILITY

NOT APPLICABLE (N/A)