



**AVIATION**

**Stage 2**

**WACE Examination 2010**

**Appendices Booklet**

Appendix A	Marble Bar (YMBL) ERSA Extract
Appendix B	Loading System Charlie
Appendix C	Cessna 172 take-off chart
Appendix D	Cessna 172 landing chart

**Appendix A Marble Bar (YMBL) ERSA Extract**

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## Appendix B Loading System Charlie

## Charlie Loading Chart

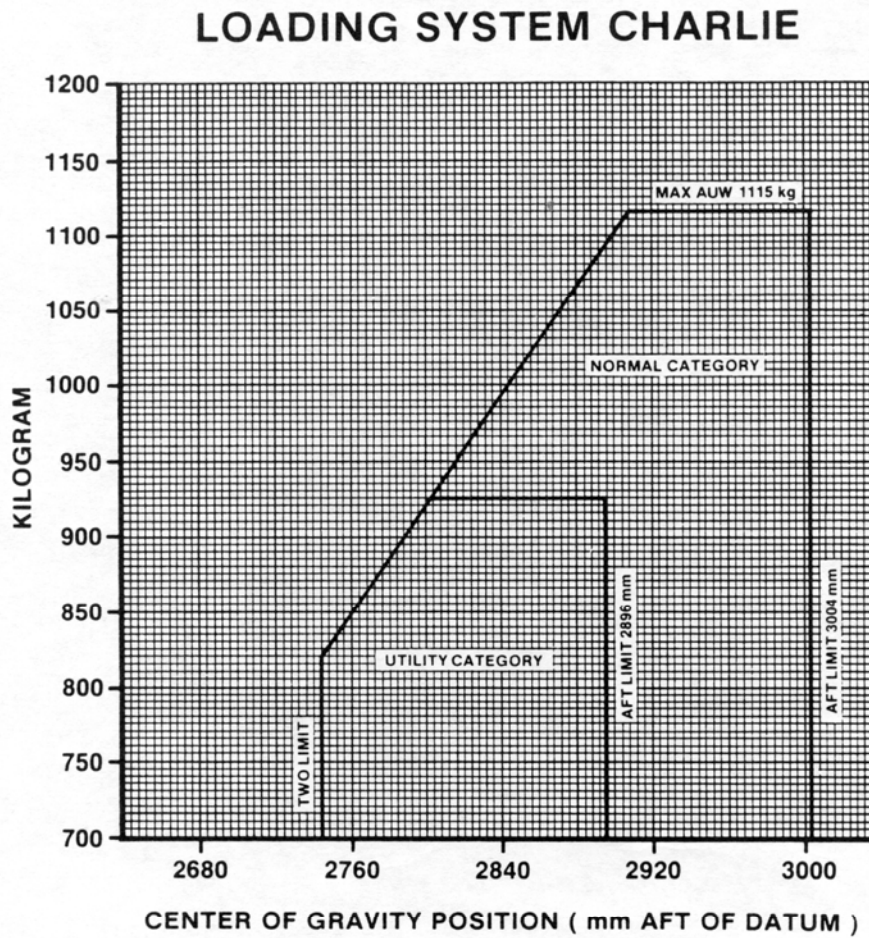
<b>LOADING SYSTEM CHARLIE</b>				
<b>INDEX UNITS</b>				
<b>FUEL ARM : 2950</b>			<b>BAGGAGE ARM : 4210</b>	
Litres	kg	INDEX UNITS	kg	INDEX UNITS
20	14	413	10	421
40	28	826	20	842
60	43	1 268	30	1 263
80	57	1 682	40	1 684
100	71	2 095	50	2 105
120	85	2 507	60	2 526
140	99	2 920	70	2 947
160	114	3 363	80	3 368
180	129	3 806	90	3 789
200	142	4 189	100	4 210
216	153	4 513	110	4 631
			122	5 136

<b>OCCUPANTS</b>		
Kg	ROW 1	ROW2
	ARM : 2750	ARM : 3600
40	1 100	1 440
45	1 237	1 620
50	1 375	1 800
55	1 512	1 980
60	1 650	2 160
65	1 786	2 340
70	1 925	2 520
75	2 062	2 700
80	2 200	2 880
85	2 338	3 060
90	2 475	3 240

<b>OIL ARM : 1230</b>			
US Quarts	Litres	kg	INDEX UNITS
6	5.7	5.0	62
7	6.6	6.0	74
8	7.6	7.0	86

See next page

Charlie Loading Chart



### ALLOWABLE CENTRE OF GRAVITY ENVELOPE

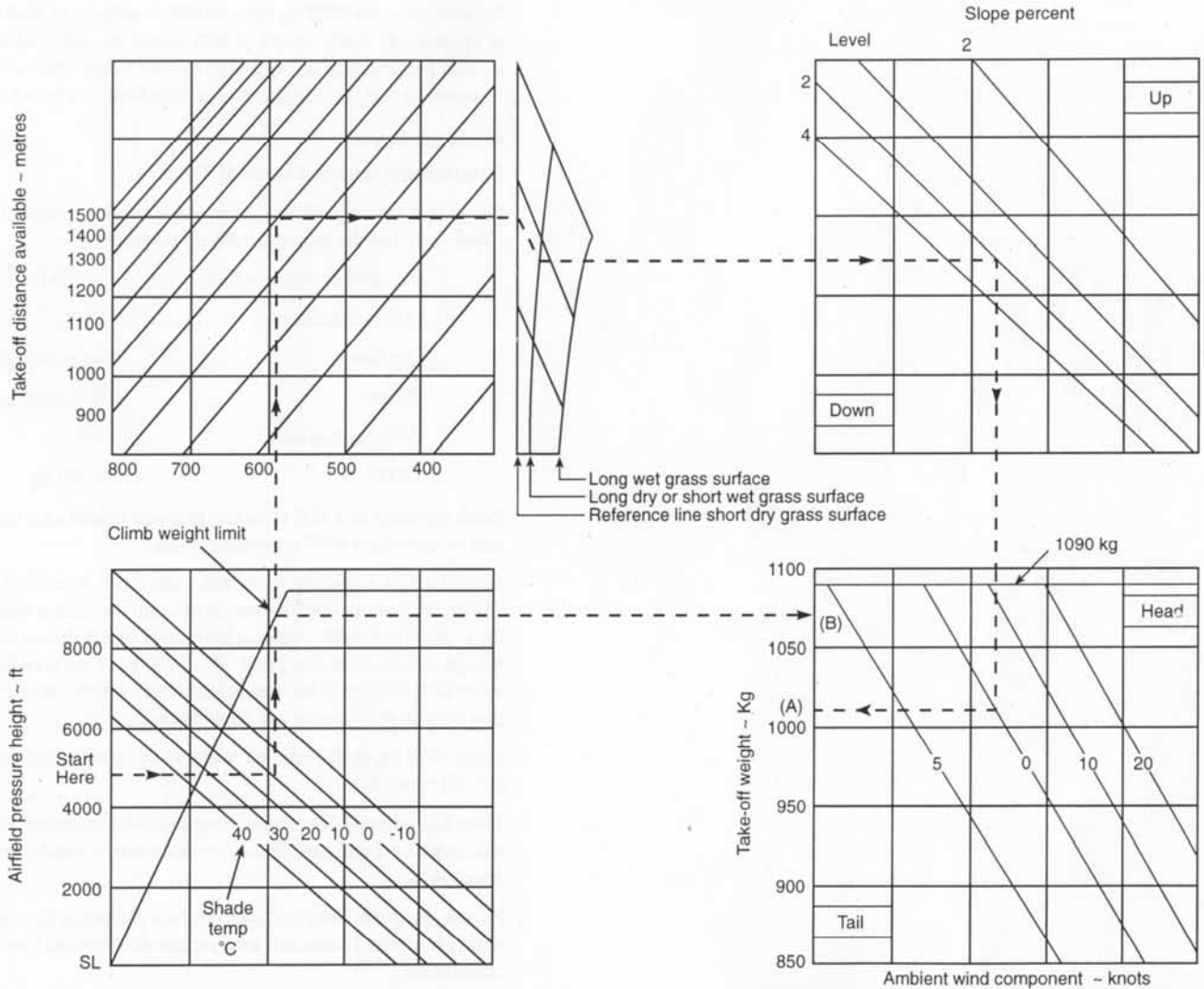
#### CONVERSION FACTORS

- 1 inch = 25.4 mm
- 1 foot = 0.305 metre
- 1 lb = 0.454 kg
- 1 Imp gal = 1.201 US gal = 4.546 litres
- 100/130 aviation gasoline : Specific Gravity = .71

Appendix C Cessna 172 Take-off Chart

NOT FOR OPERATIONAL PURPOSES

Take-off weight chart



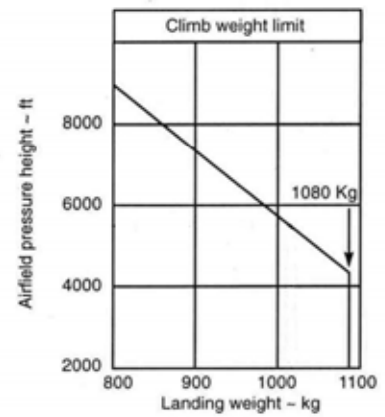
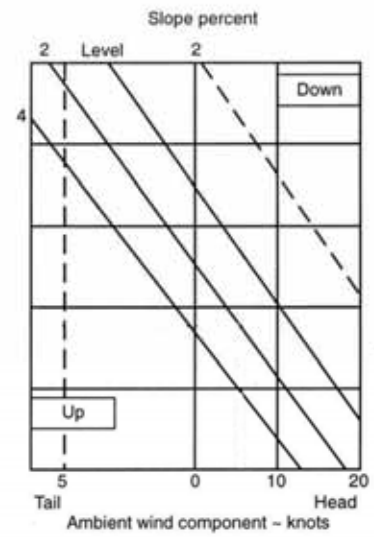
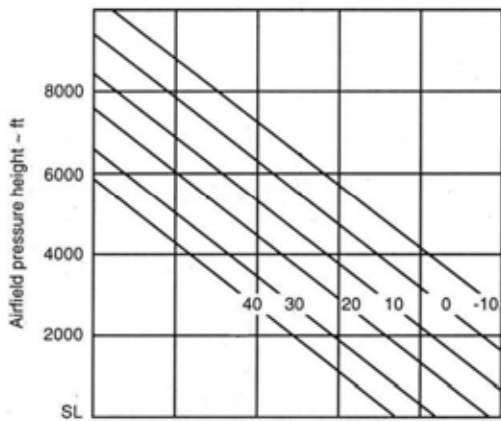
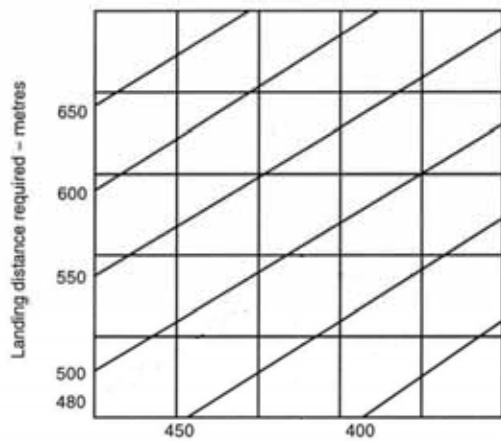
Notes:

- (1) The gross weight at take-off shall not exceed the lesser of (A) & (B)
- (2) Maximum take-off weight = 1090 kg

Power to be used	Full throttle
Flap setting	10 degrees
Take-off safety speed	60 KIAS
Take-off distance factor	1.15

Appendix D Cessna 172 Landing Chart

Landing chart



- Notes  
 (1) The gross weight at landing shall not exceed the climb weight limit  
 (2) Landing distance required does not vary significantly with weight

Flap setting	30 degrees
Approach speed	58 KIAS
Landing distance factor	1.15

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## ACKNOWLEDGEMENTS

- Appendix A** Extract from: Airservices Australia. (n.d.). ERSA Marble Bar. (YMBL). Canberra: Airservices Australia.
- Appendix B** Table from: Yeo, M., Bowers, G., Bennett, K., (2001) *Handbook of Flight* (2<sup>nd</sup> ed.). Perth: WestOne Services.
- Appendix C** Cessna 172 take-off chart from: Yeo, M., Bowers, G., & Bennett, K., 2001). *Handbook of Flight* (2nd ed.). Perth: WestOne Services, p. 153.
- Appendix D** Cessna landing chart from: Yeo, M., Bowers, G., & Bennett, K., (2001). *Handbook of Flight* (2nd ed.). Perth: WestOne Services, p. 164.

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