Recreational Pilot Licence (RPL)

SUPPLEMENT

Piper Pacer PA22/20

CONVERSION FACTORS

AVIATION GASOLINE SPECIFIC GRAVITY .71

| LITRES | →1.58→ | POUNDS |

inches ===25.4===⇒ **mm**

feet ===.305===⇒ **metres**
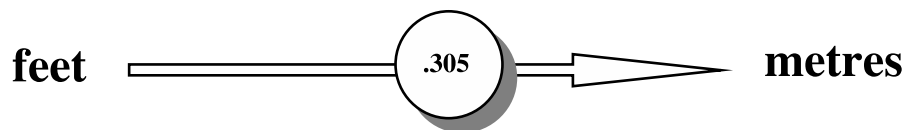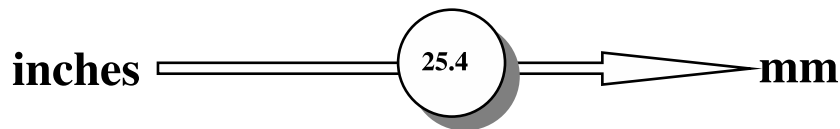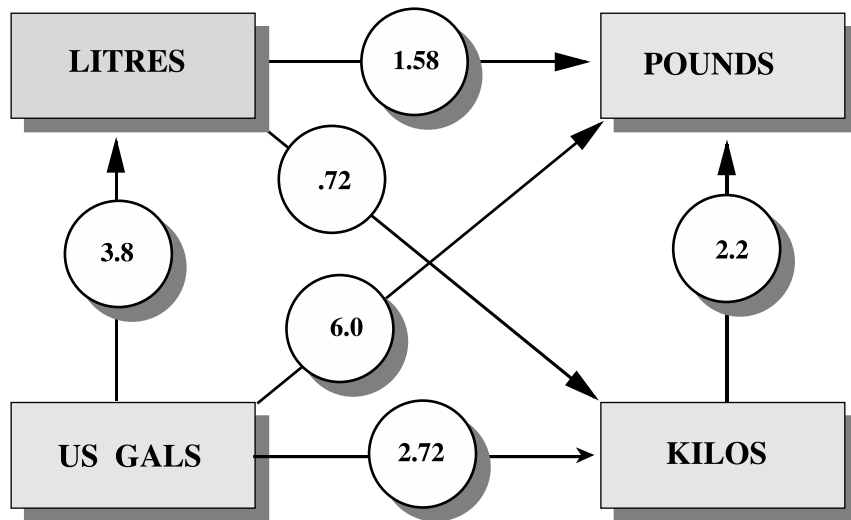
WHEN FOLLOWING THE ARROW - MULTIPLY

WHEN BACKTRACKING THE ARROW - DIVIDE

LOADING SYSTEM   Configuration 4 seats

Instructions for use of the loading system

To check the loading of the aircraft before take-off, calculate the total weight and total moments as shown in the example below.

Plot the total weight and moment on the "Centre of Gravity Envelope" chart, given on page 3, and if the intersection point is within the envelope, the loading is acceptable.

AIRCRAFT LIMITATIONS

Maximum take-off weight

Normal category	1000 kg	[2200 lbs]
Utility category	841 kg	[1850 lbs]
Maximum baggage compartment load	53 kg	[120 lbs]

Notes:

1   This aircraft is fitted with standard tanks.   [37 US gallons @ 6 lbs /gallon]

2   Empty weight includes unusable fuel and undrainable oil

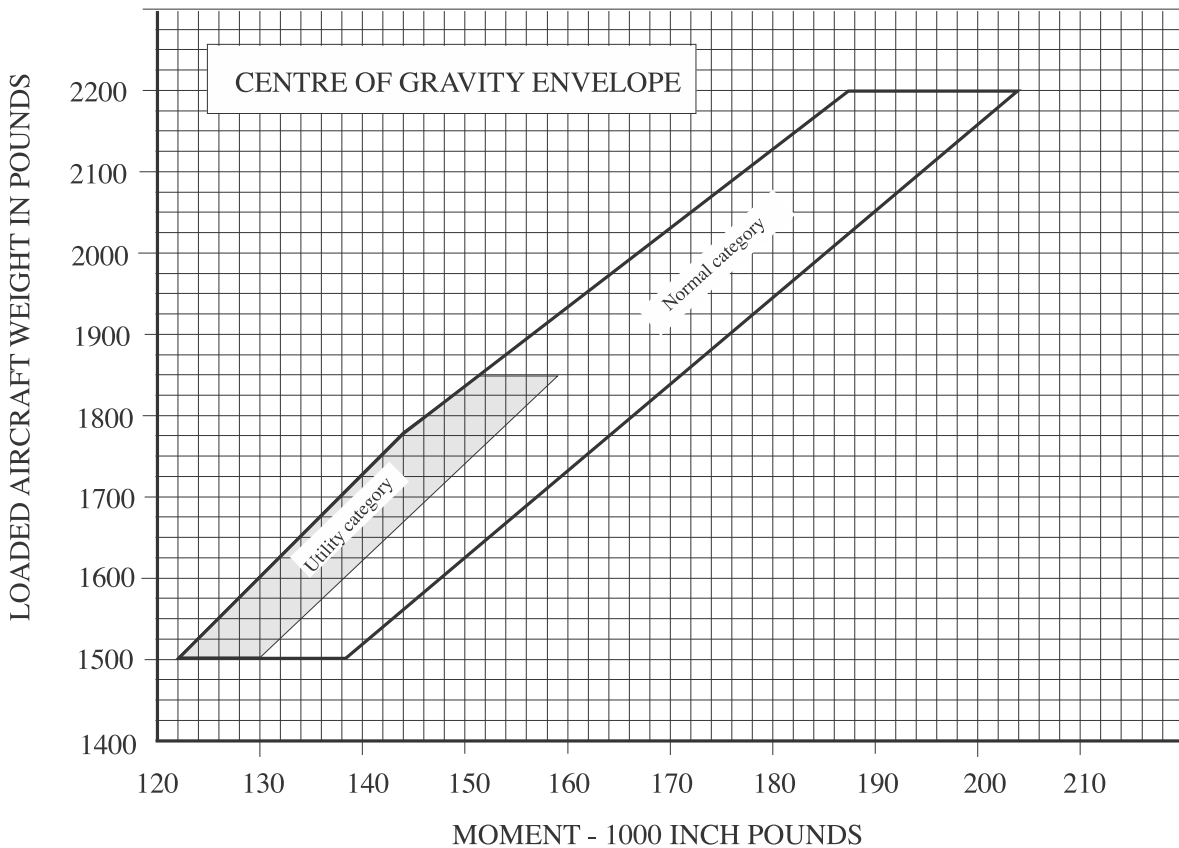3   Obtain Moment/1000 inch pounds from the loading graph on page 3

EXAMPLE

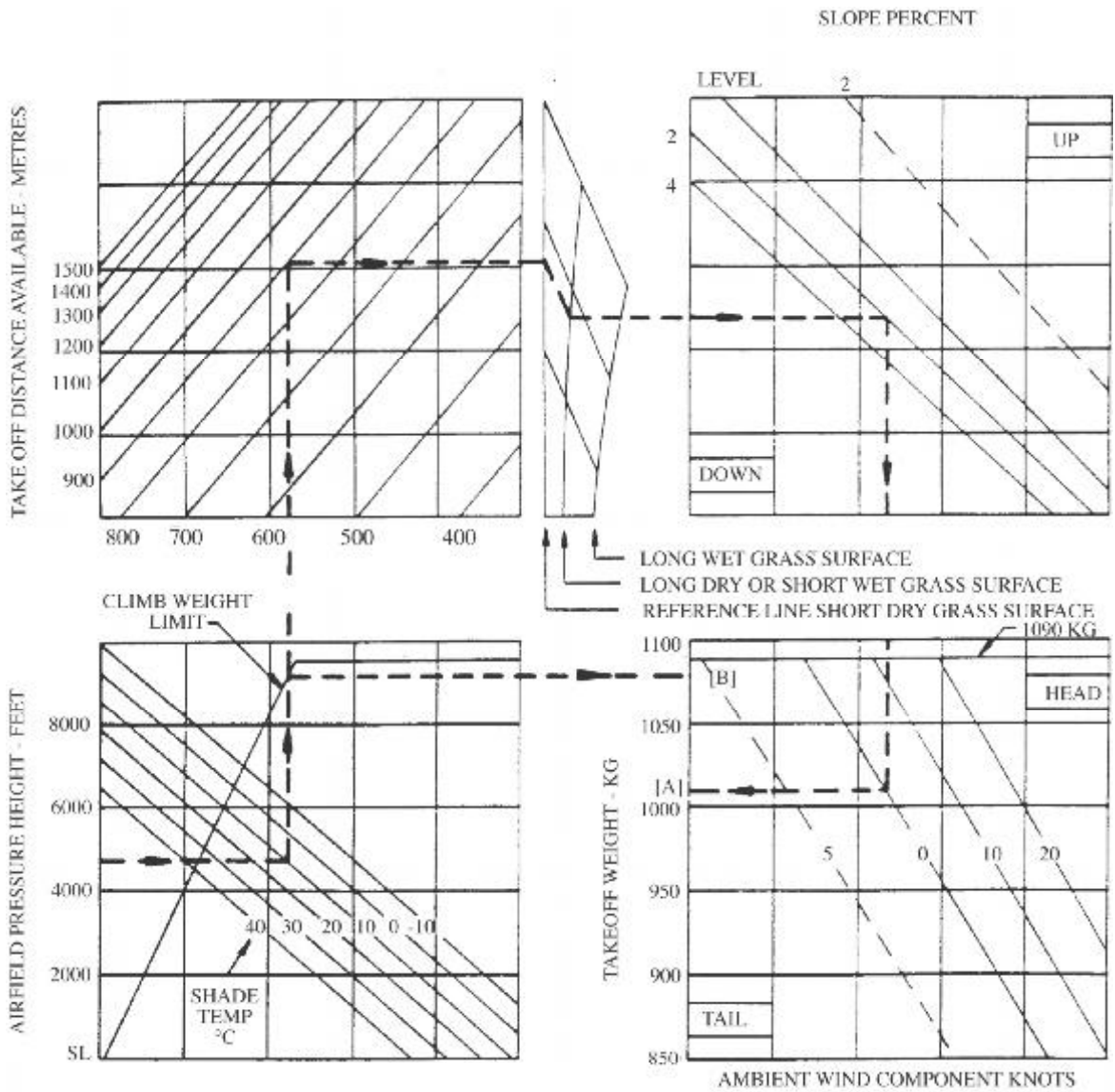|	WEIGHT [lbs]	ARM [ins]	MOMENT 1000/in lbs
Empty weight	1260	80	100.80
oil	15	32	.48
Fuel [141 litres]	222	91	20.20
pilot and co-pilot	320	91	29.12
Rear seat passengers	350	126	44.10
Baggage	25	151	3.78
Take-off weight	2192		198.48

Check C. G. is within the envelope given on page opposite

LOADING SYSTEM BRAVO

The loading graph below converts weights in each location to a corresponding moment index. However in practice [or in the examination] it is actually both faster and much more accurate to multiply the weight by the location arm in the load sheet example at left and divide the result by 1000. The load sheet example will be provided in the examination.

LOADING GRAPH

Cargo
Pilot & Co-pilot
STD Fuel [37 gals useable @ 6 lbs/gal]
OPT Fuel [51 gal useable @ 6 lbs/gal]
Rear seat passengers
Baggage

LOAD - WEIGHT IN POUNDS
MOMENT - 1000 INCH POUNDS

CENTRE OF GRAVITY ENVELOPE

Normal category
Utility category

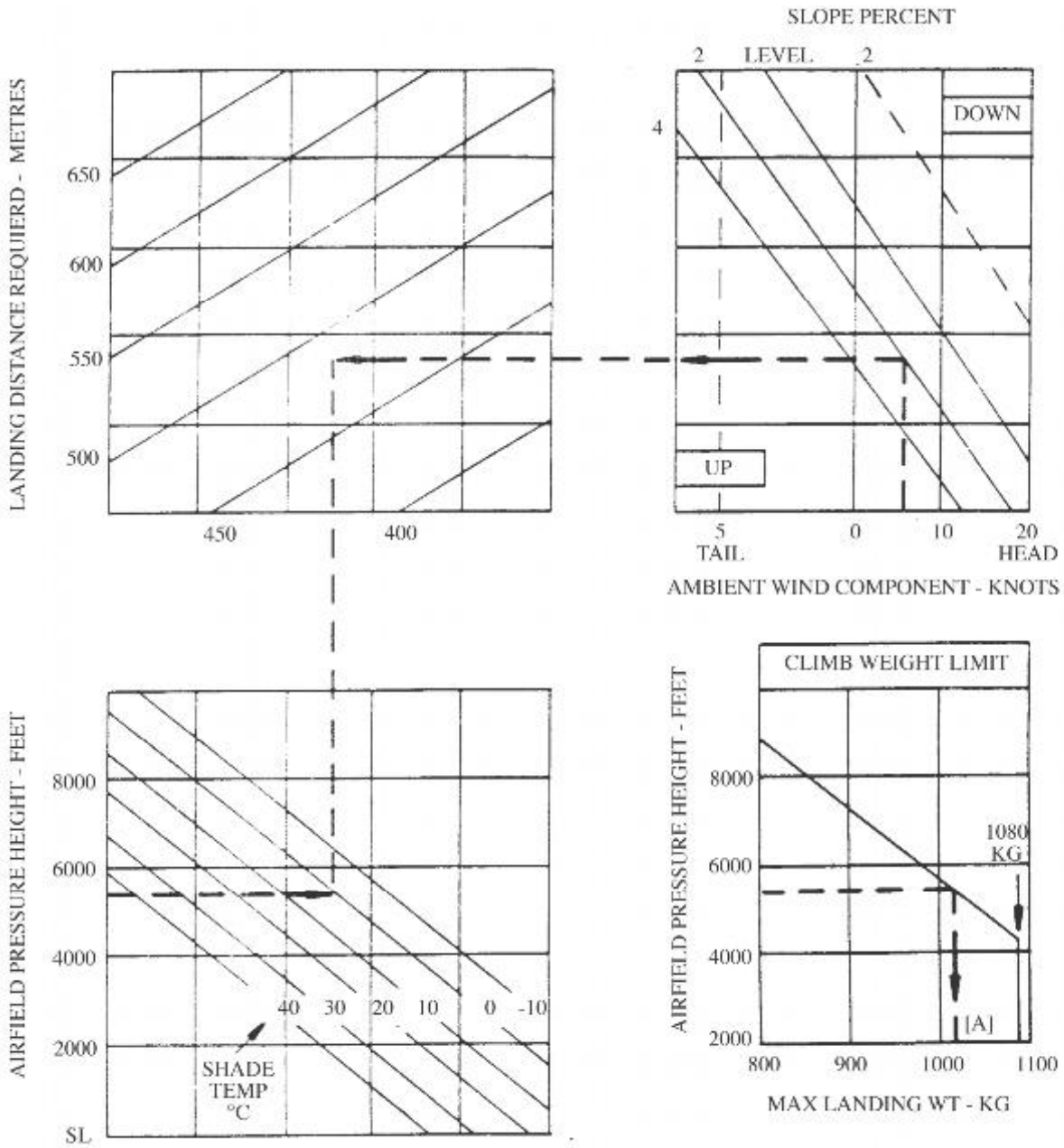LOADED AIRCRAFT WEIGHT IN POUNDS
MOMENT - 1000 INCH POUNDS
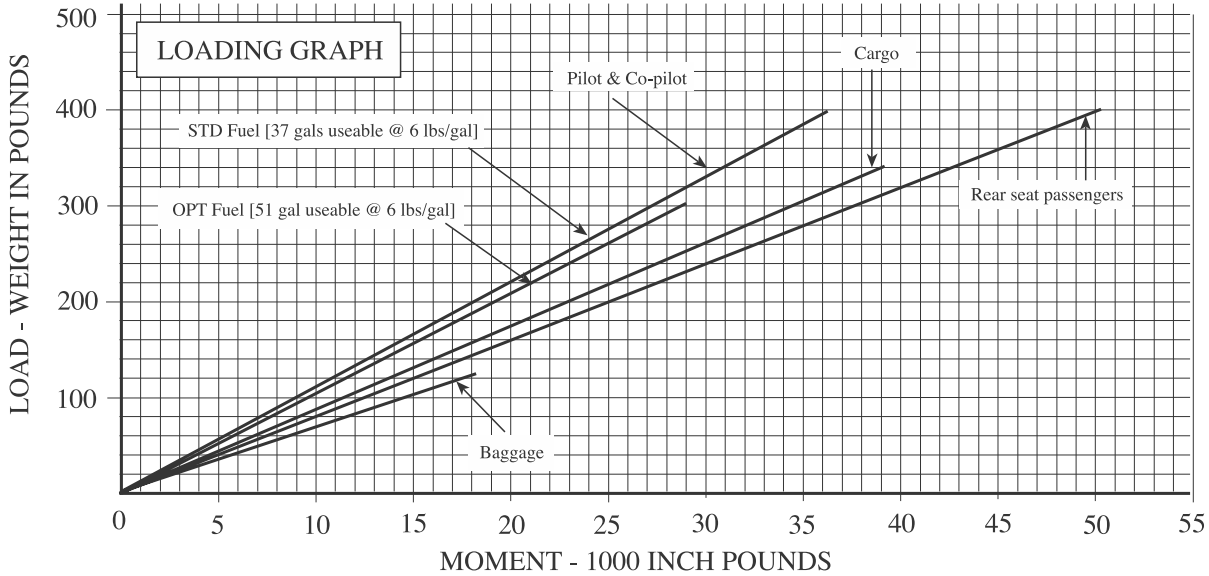
TAKE-OFF CHART

NOTES:
[1]   THE GROSS WEIGHT AT TAKEOFF SHALL NOT EXCEED THE LESSER OF [A] AND [B].
[2]   MAXIMUM TAKEOFF WEIGHT = 1090 KG

POWER TO BE USED	FULL THROTTLE
FLAP SETTING	10 DEGREES
TAKEOFF SAFETY SPEED	60 KIAS
TAKEOFF DISTANCE FACTOR	1.15

LANDING CHART

Chart axes and labels:

- Top-left panel: LANDING DISTANCE REQUIERD - METRES (650, 600, 550, 500); horizontal axis 450, 400
- Top-right panel: SLOPE PERCENT — 2 LEVEL 2, 4, DOWN, UP; horizontal axis TAIL 5, 0, 10, 20 HEAD; AMBIENT WIND COMPONENT - KNOTS
- Bottom-left panel: AIRFIELD PRESSURE HEIGHT - FEET (8000, 6000, 4000, 2000, SL); SHADE TEMP °C with lines 40 30 20 10 0 -10
- Bottom-right panel: CLIMB WEIGHT LIMIT; AIRFIELD PRESSURE HEIGHT - FEET (8000, 6000, 4000, 2000); 1080 KG; [A]; MAX LANDING WT - KG (800, 900, 1000, 1100)

NOTES:
[1]   THE GROSS WEIGHT AT LANDING SHALL NOT EXCEED [A]
[2]   LANDING DISTANCE REQUIRED DOES NOT VARY SIGNIFICANTLY WITH WEIGHT

FLAP SETTING	30 DEGREES
APPROACH SPEED	58 KIAS
LANDING DISTANCE FACTOR	1.15