C182 Performance Specifications and Limitations

Performance figures given at MAUW and speeds in KIAS unless specified otherwise.

Figures provided are averages and rounded to the safer side, they may not correspond to the exact figures for your particular model.

Structural Limitations

- Gross weight (take-off and landing): 2500lbs - 3100lbs
- Maximum landing weight: 2500lbs - 2950lbs
- Standard empty weight: 1620lbs - 1880lbs
- Max Baggage allowance in aft compartment: 120lbs
- Flight load factor (flaps up): +3.8g – 1.52g
- Flight load factor (flaps down): +3.5g – 0

Engine Specifications

- Engine (Lycoming O-470 series) power: 230 BHP at 2600 rpm
- Oil capacity: 12Qts maximum, 9Qts minimum, 10 for normal operations*
  *Engineers recommendation to operate on the low side of the minimum oil requirements.

Fuel

- Usable fuel
  - Standard tanks: 56 USG (225 litres)
  - Long range tanks: 75 USG (300 litres)
  - Wet Wing: 88 USG (300 litres)

Tyre Pressures

- Main wheel tyre pressure: 42 psi
- Nose wheel tyre pressure: 49 psi

Maximum Speeds

- Never Exceed Speed, (Vne): 167kts (193mph) (top red line)
- Maximum structural cruise speed (Vno)*: 140kts, (160mph) (speed, top of green arc)
- Maximum demonstrated crosswind component**: 15kts
- Maximum maneuvering speed (Va): 111kts (128mph)
  *May not be exceeded unless in smooth air conditions
  **Late models only

Flap limitation speeds:

- Early models: 0-40 95kts (110MPH)
- Later models: 0-10 140kts (160MPH) (top of green arc) 10-40 95kts (110MPH) (top of white arc)
Stall Speeds

Stall speed, clean (Vs) 58kts (67mph) (bottom of green arc)
Stall speed, landing config. (Vso) 52kts (60mph) (bottom of white arc)

Speeds for normal operation

Normal take-off, flaps up Raise nose at 55kts (60mph), Accelerate 90mph once obstacle cleared
Normal climb out speed 90-105kts (100-120mph)

Short field take off, Flaps 20º lift off 60kts (65mph)*, accelerate Vy when obstacles clear, retract flaps
Best rate of climb speed Sea level 75kts (90mph)
10,000ft 75kts (85mph)

Normal approach flaps 40º 65-70kts, (70-80mph)
Normal approach flaps up 70-80kts, (80-90mph)
Short field landing 65kts, (70mph)
* See notes on short field performance and speeds

Speeds for emergency operation

Engine Failure after take-off 70kts (80mph)
Forced landing 70kts (80mph) flap up
65kts (75mph) flap up
Precautionary landing 70kts (80mph) flap up,
65kts (75mph) full flap

Cruise Performance*

(Continental O470 series 230hp engines, C182 Skylane)

Cruise at 2500ft pressure altitude 2450 rpm 23”mp, 137KTAS, 14.2gph/ 54lts
Cruise at 10,000ft pressure altitude 2450rpm, 19”mp 156KTAS, 11.9gph/ 45lts
Block cruises, recommended performance 2400rpm, 23” or available MP
125kts, 55lt/hr

* Cruise figures provided from the pilots operating handbook should be used with a contingency factor, block cruises speed and fuel flow allow for contingency and for climb and descent, and are normally applied for planing purposes.