

Diamond DA40 TDI Model Guide

The Diamond DA40 TDI is a four-seat, single-engine piston airplane (listed from 2004) that runs on Jet A1 or diesel. The Diamond DA40 TDI source figures give a typical empty mass of 830 kg and a maximum takeoff mass of 1150 kg. It has a Garmin G1000 panel. Check the loading limits, the cold-weather limits and the engine control unit (ECU) checks.

KEY TAKEAWAYS

- Four seats; typical empty mass 830 kg, maximum takeoff and landing mass 1150 kg.
- Baggage limit is 30 kg, or 45 kg with the baggage extension (no more than 18 kg in the aft compartment).
- Operate only between -20°C and 54°C airplane temperature; below -20°C an external pre-heater is mandatory.
- Jet A1 and diesel weigh more than AVGAS, so check the load calculation.

SIZE AND LOADING

Span 11.94 m, length 8.01 m, height 1.97 m. Typical empty mass is 830 kg and maximum takeoff mass is 1150 kg. Typical fuel weights are 0.8 kg/l for Jet A1 and 0.84 kg/l for diesel. Use the airplane's own Mass and Balance Report for any real loading.

SPEEDS AND HANDLING

VNO is 129 KIAS and VNE is 178 KIAS. VA is 94 KIAS at 780-980 kg and 108 KIAS at 980-1150 kg. Stall speeds are VS1 52 and VSO 49 KIAS. Flap limits are 108 KIAS (T/O) and 91 KIAS (LDG). The club checklist gives rotation at 60 KIAS.

WHAT TO CHECK ON INSPECTION

Review the preflight items: pitot cover, circuit breakers, emergency fuel valve, ECU swap, battery voltage, stall warning and pitot heat. The club checklist includes a full ECU test, and a club guide warns that the rear door must be latched before taxi. Starter limit is 6 seconds, then wait 20 seconds. Warm up for at least two minutes.

SPECIFICATIONS

Seats	4
Wing Span M	11.94
Length M	8.01
Height M	1.97

V-SPEEDS

Vno Kts	129
Vne Kts	178
Va Low Weight Kts	94
Va High Weight Kts	108
Vs1 Kts	52
Vso Kts	49
Vfe Takeoff Kts	108
Vfe Landing Kts	91

WEIGHT & BALANCE

Typical Empty Weight Kg	830
Max Takeoff Weight Kg	1150
Max Landing Weight Kg	1150
Max Baggage Kg	30
Max Baggage Extension Kg	45

SAFETY NOTES

- Cold-soaked below -20°C: use an external pre-heater for the engine and pilot compartment before operation.
- Verify the rear door is latched and locked before taxi; if not, it may separate in flight.
- Complete the full ECU test without faults; the French club checklist says to abandon the flight if there are problems.