AGUSTA A109S GRAND Model Guide

The AGUSTA A109S GRAND belongs to the Agusta A109 helicopter family. The only document supplied is an FAA-approved flight manual supplement for an Inlet Barrier Filter (IBF) on A109E, A109S and AW109SP models. It gives no variant-specific weights, speeds or dimensions. Family-wide, the A109 line reaches up to 8 passengers, 126 kt cruise and 360 nm range.

KEY TAKEAWAYS

- The library lists this model as piston, but family data says turboshaft and the manual cites TOT and N1 on two engines. Confirm against the aircraft records.
- Check whether the Inlet Barrier Filter (STC SR02988CH) is fitted. It requires a hover power assurance check with at least +5°C TOT margin.
- With the IBF, maximum operating pressure altitude is 15000 ft. Bypass doors must be open in cruise above 10000 ft.
- Family-level only: A109 variants reach up to 2800 kg MTOW and a 20000 ft service ceiling. Do not read these as A109S GRAND figures.

WHAT THE SUPPLEMENT COVERS

The supplement (Rev. A, FAA approval date OCT 11 2011) applies when the AFS Inlet Barrier Filter is installed on the A109E, A109S and AW109SP. It does not change the basic manual's operating restrictions, and flight in falling and blowing snow is still permitted.

PRE-PURCHASE CHECKS ON A FILTER-EQUIPPED AIRCRAFT

Open the aft cowling louver doors and check that the filter bypass doors are closed. Read the Filter Maintenance Aid on each engine: a RED zone reading means the filter needs service. Inspect the filter elements for tears, holes or flat pleats, and ask maintenance to assess any damage.

POWER ASSURANCE AND PERFORMANCE

With the IBF fitted, only the hover power assurance check (PAC) is used, and it needs at least +5°C TOT margin. If it fails, clean the filters and recheck. If it still fails, contact maintenance. Performance drops as the filters get dirty. Category A operations need a daily PAC.

PERFORMANCE

Max Operating Pressure Altitude Ft	15000
Bypass Doors Open Above Ft	10000

SAFETY NOTES

- With a bypass door open, unfiltered air reaches the engine. Avoid dirty or dusty environments in that state to prevent compressor erosion.
- A continuous FILTER light means you should monitor TOT for a rise above 20°C, and watch N1 and for compressor stall. Service the filters before the next flight.
- Do not push or step on the filter elements. Damaged pleats reduce the filter's ability to keep dirt out of the engines.

AI-aggregated guide for the AGUSTA A109S GRAND · sources: Rotorcraft Flight Manual Supplement for the Agusta A109 Series Helicopters (#102873) · generated 2026-11-25 · Reference only, not for flight. Check the original documents before relying on this guide.