A319-100

KEY DIFFERENCES TO A320

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It is certainly true that the differences between the A320 and its smaller sibling are subtle and few in numbers, but it would be inaccurate to label the A319 an A320 with a few rows of seats removed.
A shorter fuselage and lower weights do alter a few characteristics that are noticeable while flying the aircraft. While it is possible to engineer things out of the aircraft via the fly-by-wire flight control system, some physics can't be bent by software. Different iterations of the CFM56 and IAEV2500 engines also provide for some new characteristics to be noticed.

The Flight Sim Labs A319-X product features all that makes an A319 different to the A320.

A319 VS. A320 KEY POINTS

- Revised flight characteristics that resemble true A319 behaviour and are not just those of an A320 with lower weight.
- New engine variants with realistic performance and fuel consumption
- Flight Augmentation Computers (FAC) have been re-modelled with correct speeds (Green Dot, Slats, Flaps, VLS etc.)
- Trim settings are accurate to A319 numbers, precisely calibrated to Centre of Gravity (CG), Angle of Attack (AOA) and Mach number.
- Speed Brake deflection changes to account for reduced drag.

A319-X Technical Data

Max. Take-Off Weight (MTOW): **75.5t**
Operating Empty Weight (OEW): **40.4t**
Max. Zero Fuel Weight (MZFW): **58.5t**
Max. Landing Weight (MLW): **61t**

OECG: **21.6%**

Engine variants:
IAE V2524-A5 / CFM56-5B7

- Ground handling revised to resemble changed behaviour due to lower weights and shorter wheel base.
- Different rudder travel limits and yaw damper authority at or below 160kts.
- Single-door over-wing exit configuration with correct modelling of the associated Display Management Computer (DMC) that supplies the lower ECAM screen. Dual-exit option is available with the corresponding Flight Warning Computer pin programming.
  This includes the possibility to have different passenger announcements depending on exit configuration.

ENGINES

The engine options mounted on the A319-X differ from each other much more compared to the A320-X.
The A320 versions had a thrust difference of only 400 pounds (lbf), whereas the A319 engines differ by 2'200lbf. So the CFM engine has the same amount of thrust as the one on the A320, with the IAE engine being the lower-thrust option, which in turn results in a lower fuel burn compared to CFM.
Switching between CFM and IAE airframes, you will therefore notice quite some different characters between the two.

PILOT POINT OF VIEW

The technical differences mentioned above do result in some subtle but noticeable changes for pilots:

- Lighter aircraft with essentially the same wing means it flies a bit lighter too, especially in the landing. At normal A319 landing weights, pilots tend to flare a little later (ca. 20ft).
- The VAPP is slower as the aircraft is lighter, so there's more energy to lose on the approach. This is especially noticeable on a fixed speed approach (i.e. 160kts to 4DME final).
- The aircraft slows down a little slower on the approach compared to an A320, so a little more time is required (anticipation).
- Even with derated engines, the aircraft climbs better after take-off. At light weights some impressive rates of climb can be achieved.