



# Airframe noise from the A320 aircraft family

ERCD  
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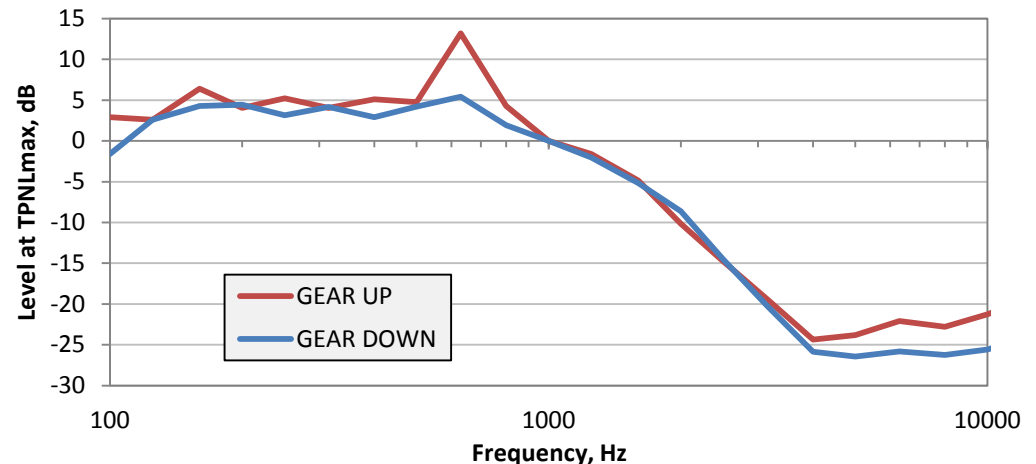
# Tonal noise from the A320 family

- Following concerns raised around Heathrow airport in 2005, the issue of tonal noise emanating from the A320 family of aircraft on approach was brought to the attention of Airbus by the CAA
- Complaints of a high pitch “whine” which could be heard on the ground at relatively large distances from the airport (Greenwich)
- Similar concerns had also been raised around Paris and Frankfurt airports at around the same time
- Measurements undertaken have confirmed the tonal noise is due airframe noise not engine noise and is on all present A320 family variants, i.e. A318/319/320/321, irrespective of engine variant.

# NTK noise measurements at Heathrow

- Tone is emitted around 500-600Hz, close to peak sensitivity of the human ear, hence it is very perceptible.
- Close to the airport it is masked by noise from landing gear, flaps and the higher thrust required in the landing configuration.
- Very audible during intermediate approach phase 7-15nm from landing.

Average one-third octave band spectra for A319/320  
7.5 NM to threshold, data normalised to level at 1 kHz



# Tonal noise source

- Investigation by Airbus has revealed two tonal noise components, generated by the Fuel Over Pressure Protector (FOPP) cavities.

