



Meggitt Sensing Systems

Cold fan trim balancing

Meggitt provides cold fan trim balancing on most engine vibration monitors (EVMs) and engine monitoring units (EMUs) fitting Boeing 737, 747, 757, 767, 777 and 787, as well as the Airbus A320 family, A330, A340 and A380.

Fundamental balancing procedure

The amplitude and the angle of the unbalanced weight are measured and calculated. An equivalent weight is mounted 180° opposite to the unbalance weight.

Current balancing methods

- **Three shot:** based on only the amplitude measurement; requires three ground runs
- **Cold fan trim balancing:** phase and amplitude measurements acquired during revenue flights and corrections digitally output by EVM or EMU; much more economical

Cold fan trim balancing procedure

1. Data acquisition of unbalance vibration measurements, both amplitude and phase, occur during a revenue flight at multiple rpm values and under stable conditions. Stability criteria can be user-defined to increase acquisition probability.
2. Modeling algorithms utilize the unbalance vibration amplitude and phase to calculate the unbalance weight amplitude and angle. Influence coefficients characterizing the engine are pre-loaded for each engine type, but the operator can modify specific coefficients.
3. The calculated counter-weight will be displayed on the front panel of the unit or via the MCDU, including the part number of the screw and location of the hole.



Meggitt Sensing Systems

www.meggitt.com

www.meggittsensingsystems.com

Europe, Middle East and Africa
Rte de Moncor 4
1701 Fribourg, Switzerland

Americas
14600 Myford Road
Irvine CA 92606, USA

Asia Pacific
1A Seletar Aerospace Link
Seletar Aerospace Park
Singapore 797552
Tel: +65 6511 7200

Tel: +41 26 407 11 11

Tel: +1 (949) 493 8181

MEGGITT
smart engineering for
extreme environments