

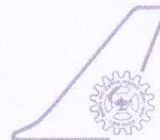
PD PR 1225



Review of Aircraft Engine Health Management Systems

BRIJESHKUMAR SHAH, SARVAJITH M, S THENNAVARAJAN,
SOUMENU JANA, V UPENDRANATH, S RAMAMURTHY *
Propulsion Division
*Hon. Consultant

Project Document PR 1225
August 2012



National Aerospace Laboratories
(Council of Scientific & Industrial Research)
Bangalore 560 017, India

PD PR 1225



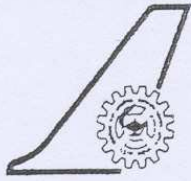
Review of Aircraft Engine Health Management Systems

BRIJESHKUMAR SHAH, SARVAJITH M, S THENNARAJAN,
SOUMENU JANA, V UPENDRANATH, S RAMAMURTHY *
Propulsion Division
*Hon. Consultant

Project Document PR 1225
August 2012



National Aerospace Laboratories
(Council of Scientific & Industrial Research)
Bangalore 560 017, India



NATIONAL
AEROSPACE
LABORATORIES

Class : Not Classified

No. of copies: 10

Title : Review of Aircraft Engine Health Management Systems

Author/s: Brijeshkumar Shah, Sarvajith M, S. Thennavarajan, Soumendu Jana,
V. Upendranath, S. Ramamurthy (Hon. consultant)

Division : PROPULSION DIVISION

NAL Project No. : P-1-325

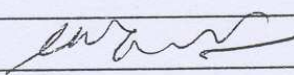
Document No. : PD PR 12 25

Date of issue : August, 2012

Contents : Pages Figures Tables References

External Participation : Nil

Sponsor : ADA (NPMASS), Bangalore

Approval : Head, Propulsion. 

Remarks :

Keywords : Aero Engine, Literatures, Artificial Intelligence Model, Gas Path Analysis, Engine Health Management Systems

Abstract:

Aircraft engine is one of the most complex systems demanding efficient monitoring for safe operation and timely maintenance of the aircraft. A survey of the aircraft engine health monitoring / management (EHM) systems available in the literature is presented in this report. Attempt has been made to identify distinct systems and methodologies available at present for the aircraft engines. This will provide a good basis towards the engine health monitoring research initiated at NAL under a NPMASS sponsored project. Detailed review of gas turbine engine health management systems and related literatures has been presented. Attempt has been made to understand future requirements of the advance sensors for intelligent aero engine from EHM perspective.