

AUTOMATED ENGINE DATA DIAGNOSTIC ANALYSIS

ABSTRACT OF THE DISCLOSURE

A method for diagnosing potential faults reflected in operational data for a turbine engine includes the steps of generating a diagnostic pattern for the operational data and comparing the diagnostic pattern with a plurality of historical patterns, to thereby identify one or more likely potential faults reflected in the operational data. The diagnostic pattern comprises a plurality of scalars. Each scalar represents an arithmetic relationship between values of the operational data and values predicted by a baseline thermodynamic model. Each historical pattern is linked to one or more specific faults.