

DIAGNOSTIC METHOD AND SYSTEM FOR TURBINE ENGINES

ABSTRACT

A method and system for evaluating whether faults detected during the testing of a gas turbine engine are related to the performance problems of the engine or to some other abnormality unrelated to engine performance. One performance parameter of the engine is evaluated under one performance condition to generate a first set of current engine data that is then compared to a first set of prior engine data to determine if there is an abnormality. If one is detected, this performance parameter is then evaluated under at least two different performance conditions to generate a second set of current engine data that is compared to a second set of prior engine data to determine if there is an abnormality. If one is detected, the abnormality is evaluated to see if the fault is unrelated to the performance of the engine. If one is not detected, this performance parameter is evaluated relative to at least one other performance parameter to generate a third set of current engine data that is compared to a third set of prior engine data to determine if there is an abnormality. If one is detected after this comparison of the third set of current to prior engine data, the abnormality is then evaluated to see if it is unrelated to engine performance. If one is not detected, the abnormality is then evaluated to determine if the fault is related to engine performance.

Fig. 1



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