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(54) **MALFUNCTION CONDITION JUDGMENT APPARATUS, CONTROL METHOD, AUTOMOBILE AND PROGRAM METHOD**

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(21) Appl. No.: **11/443,517**

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(57) **ABSTRACT**

(51) **Int. Cl.**
G06F 9/44 (2006.01)
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(52) **U.S. Cl.** **706/52**
(58) **Field of Classification Search** None
See application file for complete search history.

A malfunction condition judgment apparatus (MCJA) that judges malfunction condition (MC) of an observed object based on a change of observed values. The MCJA acquires time series data for values of each of a plurality of variables; calculates, with respect to each of the variables, a statistic defining a probability density function of that variable at T1, based on the value of that variable at T1 and that statistic at a point of time prior to T1; calculates dissimilarity showing an extent of variation between the statistic calculated for each variable and a statistic of a criterial probability density function predetermined corresponding to that variable; and picks, out of the plurality of variables, a variable for which the calculated dissimilarity is larger than a predetermined reference value, as the variable by which MC of the observation object is detected.

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1 Claim, 7 Drawing Sheets

