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(54) **A check method for washing machines**

(57) Check method for washing machine comprising the steps of: checking whether the selected washing program cycle has been completed or not (S303); if said cycle has not been completed, checking whether this cy-

cle has been canceled by the user or not (S305); if said cycle has not been canceled, checking whether or not the cycle has been terminated due to a malfunction (S307).

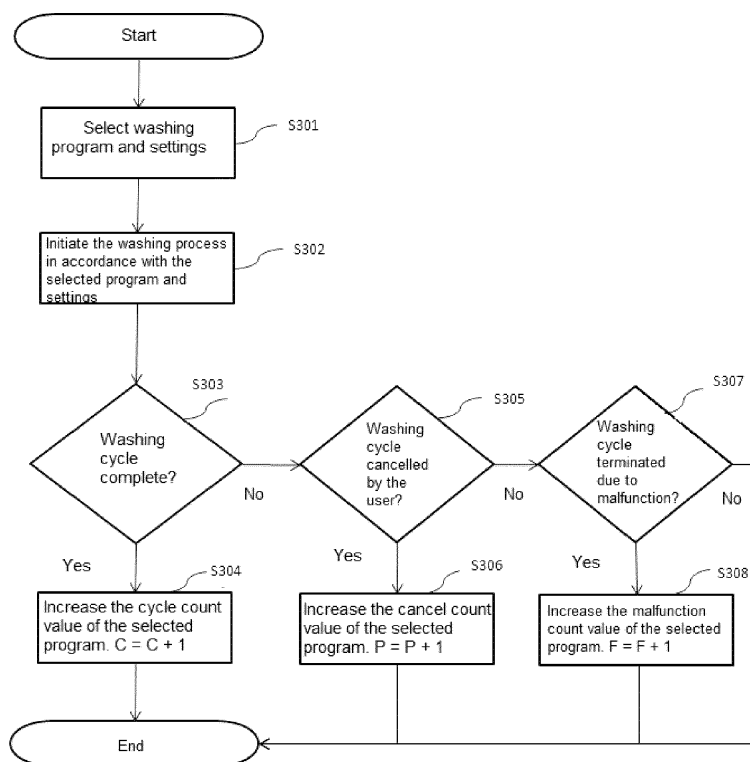


Figure – 1

Description

Technical Field

[0001] Present invention relates to storing and checking the count of cycles in a washing program conducted by a washing machine during operation.

Prior Art

[0002] As is known, various operation programs can be carried out in washing machines and machine components may wear depending on usage frequency of these programs. Moving components of washing machines such as engine, drum, and valves and of dishwashing machines such as pump, valves and nozzles may lead to malfunction over time. Therefore; identifying the reasons behind malfunctions and predicting the approximate life of components which will malfunction have become an important from the viewpoint of manufacturers. To this end, at least the usage frequency of the machine programs should be known.

[0003] Published patent document KR20010036912 of the prior art discloses a system displaying usage count of a washing machine by functions when the user orders wherein the usage count of the programs of a washing machine are counted and stored.

Brief Description of the Invention

[0004] The check method of the invention has been developed for washing machines. The method comprises the steps of: checking whether the selected washing program cycle has been completed or not; if said cycle has not been completed, checking whether this cycle has been canceled by the user or not; if said cycle has not been canceled, checking whether or not the cycle has been terminated due to a malfunction. In addition, the count and time of the incomplete cycles, canceled cycles and cycles terminated due to malfunctions can be also displayed to the user on demand.

Objective of the Invention

[0005] The aim of the invention is to check and store the usage frequency of the programs conducted in washing machines.

[0006] Another aim of the invention is to check and store whether or not the programs conducted in washing machines have been canceled on user's request.

[0007] Another aim of the invention is to check and store whether or not the programs conducted in washing machines have been terminated due to malfunction.

[0008] Another aim of the invention is to display to the user the stored results of the checking.

Description of the Drawings

[0009] The check method of the invention is illustrated in the annexed drawings wherein

Figure 1 is a flow chart which shows the steps of the check method for washing machines.

Disclosure of the Invention

[0010] The check method of the invention has been developed for washing machines within the scope of which are included washing machines and dishwashing machines. The washing program cycles of washing machines are counted and stored by this invention. The count of cycle is a value which indicates the usage frequency, i.e. how many times the program of the washing machine is repeated, of the machine. The operation of the electrical components (engine, heater, valve, indicator etc.) of the washing machine checked by the invention is regulated by at least one control unit; the stored values are saved in the memory (associated with the control unit) of the machine. The stored values are displayed to the user (end user or service staff) directly over the machine or indirectly via an electronic network.

[0011] The main steps of the check method are shown in the flow chart illustrated in Figure 1. First, the washing program and washing settings are selected (S301); washing process is initiated in accordance with the selected program and settings (S302). Then, it is checked whether or not the washing program cycle has been completed (S303); if it has been completed, the increased count of cycle (C) is stored (S304). If the cycle has not been completed, it is checked whether or not the cycle has been canceled by the user (S305). If the cycle has been canceled, the canceled count of cycle (P) is stored (S306). If the cycle has not been canceled, it is checked whether or not the washing cycle has been terminated due to malfunction (S307). If the cycle has been terminated due to malfunction, the increased count of termination due to malfunction (F) is stored (S308). Following the storing processes, main steps of the method are ended. (during the above mentioned storing processes, execution times (T) of program cycles can be stored)

[0012] In the next steps of the check method (not shown), desired stored information (C, P, F values and time information) can be viewed by the user. The display screen may be utilized for this purpose, or in the presence of an electronic network connection, these information can be accessed by means of another device connected to this network.

[0013] Present invention provides convenience particularly in life tests (performed by manufacturers) wherein the count of cycle at the end of which a component loses its functionality is calculated. In addition, the invention provides the manufacturers with valuable information about the washing habits of users since the invention reveals information as to how many times a washing pro-

gram of the washing machine is used by a user.

Claims

1. A check method for washing machines **characterized by** comprising the steps of:
 - checking whether or not the washing program cycle has been completed (S303);
 - if the cycle has not been completed, checking whether or not the cycle has been canceled by the user (S305);
 - if the cycle has not been canceled, checking whether or not the washing cycle has been terminated due to malfunction (S307).
2. A method according to Claim 1 **characterized by** comprising the step of storing (S304) the count of completed cycles (C).
3. A method according to Claim 1 **characterized by** comprising the step of storing (S306) the count of canceled cycles (P).
4. A method according to Claim 1 **characterized by** comprising the step of storing (S308) the count of cycles terminated due to malfunction (F).
5. A method according to Claim 1 **characterized by** comprising the step of storing the execution times (T) of programs or cycles.
6. A method according to any one of the Claims 2 to 5 **characterized in that** the desired stored information (C, P, F, T) can be displayed to the user.

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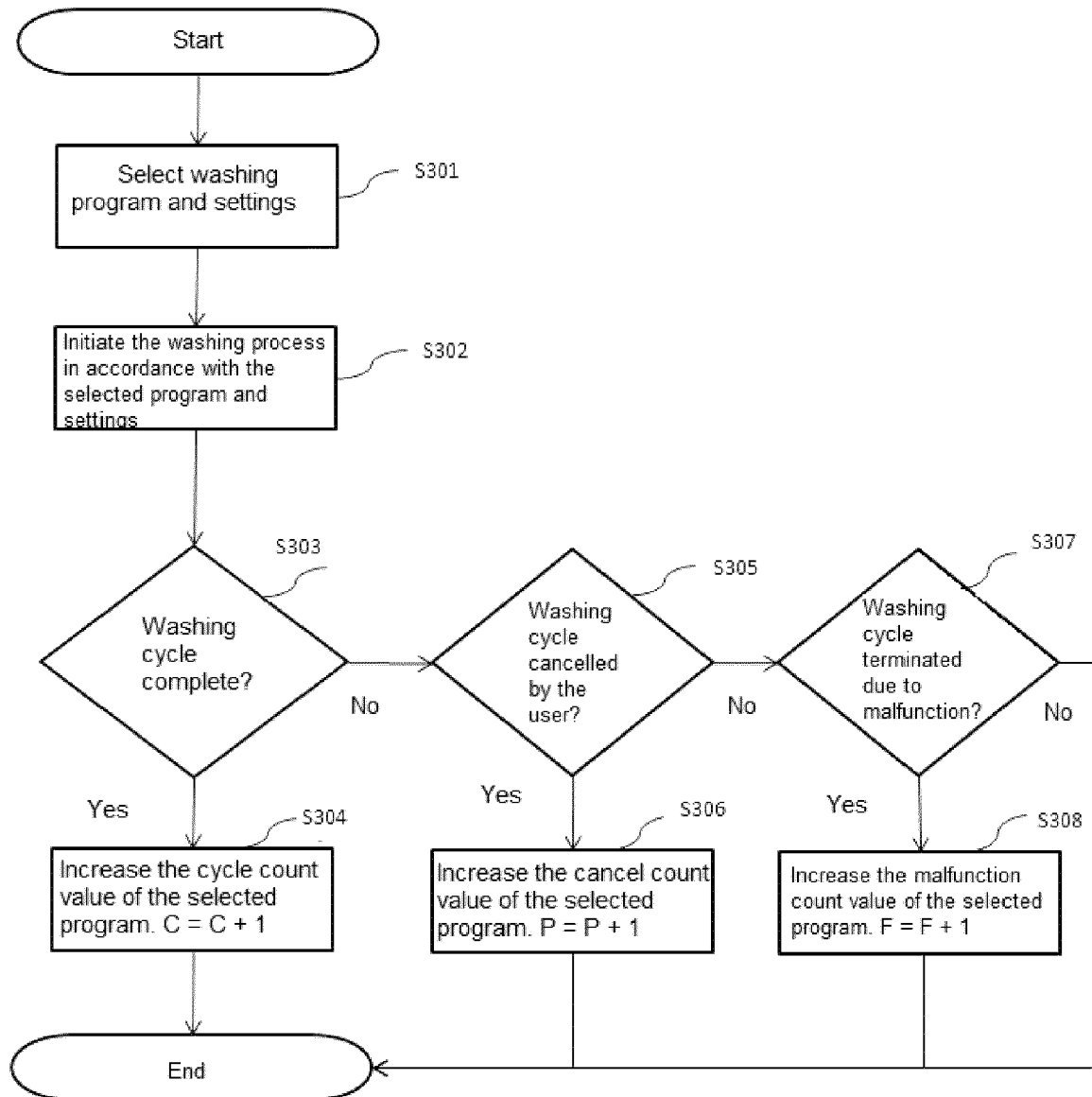


Figure – 1



EUROPEAN SEARCH REPORT

Application Number
EP 12 15 5143

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 277 531 A (TOSHIBA KK [JP]; TOSHIBA AVE KK [JP]) 2 November 1994 (1994-11-02) * page 1, lines 3-6; page 6, lines 4-24; page 8, lines 7-14; page 10, line 13 - page 13, line 7; page 18, lines 3-10; claims, figures 1, 2, 6-8D *	1-6	INV. D06F33/02
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) D06F A47L
Place of search Munich		Date of completion of the search 16 August 2012	Examiner Clivio, Eugenio
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPO FORM 1503 03-82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 12 15 5143

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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16-08-2012

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REFERENCES CITED IN THE DESCRIPTION

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