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[Continued on next page]

(54) Title: METHOD FOR REDUCING QUIESCENT POWER DRAW AND MACHINE USING SAME

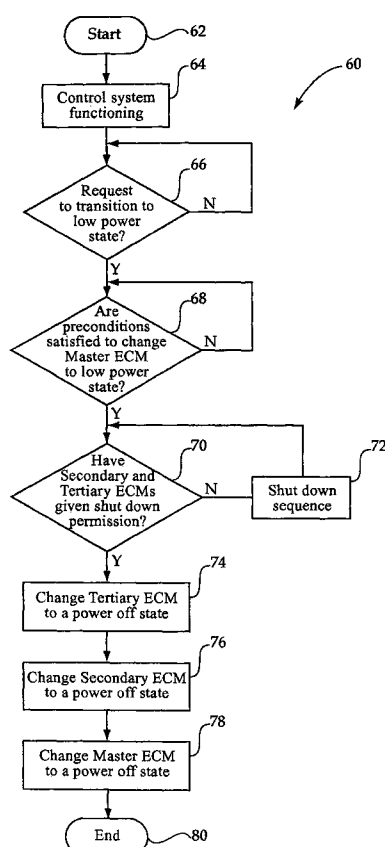


Figure 4

(57) Abstract: A machine includes a master electronic control module (40) and at least one secondary electronic control module (42, 44). A method of operating the machine includes steps of determining whether preconditions are satisfied for changing the master electronic control module (40) from an operating state to a low power state, and determining whether preconditions are satisfied for changing the secondary electronic control module (42, 44) from an operating state to a power off state. The method also includes steps of changing the secondary electronic control module (42, 44) from the operating state to the power off state, and changing the master electronic control module (40) from the operating state to the low power state.



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INTERNATIONAL SEARCH REPORT

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/168072 A1 (SAITO HIROYUKI [JP] ET AL) 4 August 2005 (2005-08-04) paragraphs [0131], [0208]; figures 1,28	1,2,4,6-8
X	EP 0 515 042 A (PIONEER ELECTRONIC CORP [JP]) 25 November 1992 (1992-11-25) column 10, line 52 - column 11, line 34; figure 1	1,2,4,7,8
X	US 2003/159076 A1 (DELISLE DAVID J [US] ET AL) 21 August 2003 (2003-08-21) paragraph [0013]	1,7

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005168072 A1	04-08-2005	NONE	
EP 0515042 A	25-11-1992	DE 69203039 D1 DE 69203039 T2 JP 4326897 A	27-07-1995 22-02-1996 16-11-1992
US 2003159076 A1	21-08-2003	NONE	