

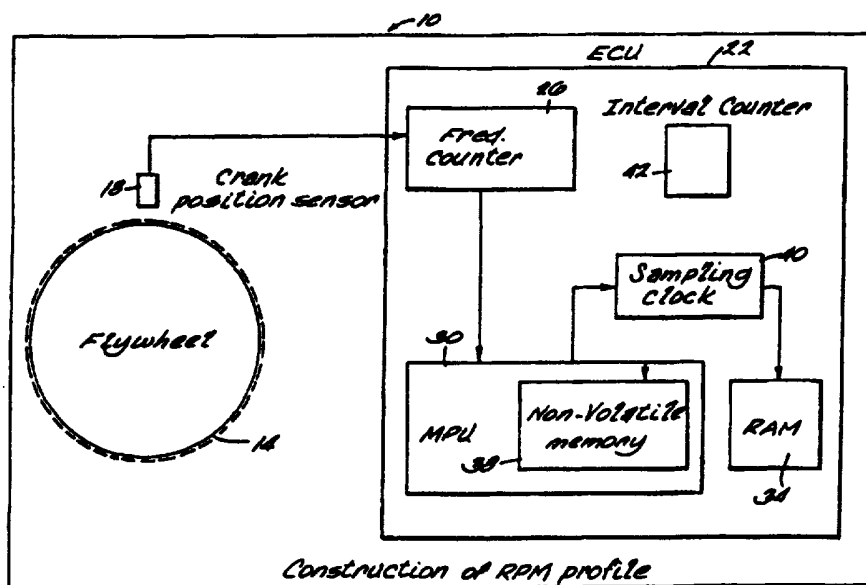


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<p>(21) International Application Number: PCT/US97/10469 (22) International Filing Date: 13 June 1997 (13.06.97) (30) Priority Data: 60/020,247 21 June 1996 (21.06.96) US (71) Applicant (for all designated States except US): OUTBOARD MARINE CORPORATION [US/US]; 100 Sea Horse Drive, Waukegan, IL 60085 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): NG, Paul, T. [US/US]; 697 Cherry Valley Road, Vernon Hills, IL 60061 (US). (74) Agents: SANDLER, Ronald, A. et al.; Jones, Day, Reavis & Pogue, 77 West Wacker Drive, Chicago, IL 60601-1692 (US).</p>	<p>(81) Designated States: AL, AM, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 26 February 1998 (26.02.98)</p>
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(54) Title: **METHOD AND APPARATUS FOR CREATING A PROFILE OF OPERATING CONDITIONS OF AN ENGINE**



(57) Abstract

A method and apparatus for measuring and recording engine performance conditions are disclosed. Crank position sensor (18) is used to determine speed, which is recorded in memory (34 or 38) to form an RPM profile characterizing the operating history of the engine.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/10469

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G01M 15/00
US CL :73/116, 117.3; 364/431.04, 431.07

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)

U.S. : 73/116, 117.3; 364/431.04, 431.07

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

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

APS text
Search terms:Record (5a) speed, record (5a) rpm, RAM, engine

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,757,454 A (HISATAKE et al.) 12 July 1988, Abstract.	1-13
Y	US 4,866,616 A (TAKEUCHI et al.) 12 September 1989, Abstract.	1-13
Y	US 4,939,652 A (STEINER) 3 July 1990, Abstract.	1-13
Y	US 5,173,856 A (PURNELL et al.) 22 December 1992, Abstract.	1-13
Y	US 5,305,214 A (KOMATSU) 19 April 1994, Abstract.	1-13
A	US 4,858,135 A (CLISH et al.) 15 August 1989.	1-13

Further documents are listed in the continuation of Box C. See patent family annex.

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Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Authorized officer
George Dombroske
GEORGE DOMBROSKE

Facsimile No. (703) 305-3230

Telephone No. (703) 305-4700

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/10469

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,280,185 A (MARTIN) 21 July 1981.	1-13