

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 February 2002 (14.02.2002)

PCT

(10) International Publication Number
WO 02/12689 A1

(51) International Patent Classification⁷: **F02B 77/04**,
B08B 3/04, 3/08, 9/027

(21) International Application Number: PCT/NZ01/00161

(22) International Filing Date: 9 August 2001 (09.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
506284 10 August 2000 (10.08.2000) NZ

(71) Applicant (for all designated States except US): **INNOVATIVE SYSTEMS TECHNOLOGIES LIMITED**
[NZ/NZ]; 7c South Lynn Road, Titirangi, Auckland (NZ).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BARNARD, Gavin, Perryman** [NZ/NZ]; 42/4 Ferndale Road, Mt Wellington, Auckland (NZ). **BARMBY, Barry, Wallace** [NZ/NZ]; 32, Hill Street, Onehunga, Auckland (NZ).

(74) Agents: **HAWKINS, Michael, Howard** et al.; Baldwin
Shelston Waters, P.O. Box 852, Wellington (NZ).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

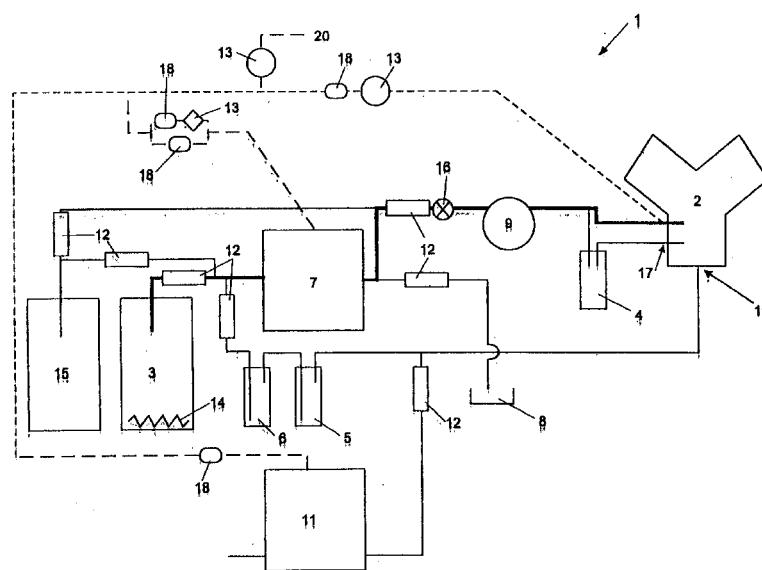
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR CLEANING MACHINES



(57) Abstract: A method of cleaning a lubrication system of a machine includes removing existing lubricant and circulating a cleaning fluid through the lubrication system. After the cleaning fluid has been removed, a neutralising fluid is circulated through the lubrication system, whereby the neutralising fluid combines or reacts with the cleaning fluid to produce a fluid that does not adversely affect the lubricating qualities of fresh lubricating fluid. An apparatus (1) for carrying out the method includes first (3) and second (15) reservoirs to receive the cleaning fluid and neutralising fluid respectively, one or more connectors to connect the apparatus to the machine, one or more pumps adapted to circulate cleaning fluid and neutralising fluid and a controller to control the transfer of the cleaning fluid and neutralising fluid from the reservoirs to the machine.