US007152636B2

(12) **United States Patent**
Petty

(10) **Patent No.: US 7,152,636 B2**
(45) **Date of Patent: Dec. 26, 2006**

(54) **BRAKE FLUSH ACCELERATOR**

(75) Inventor: **Jon A. Petty**, Loa, UT (US)

(73) Assignee: **Phoenix Systems, L.L.C.**, Bicknell, UT (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **11/286,925**

(22) Filed: **Nov. 23, 2005**

(65) **Prior Publication Data**

US 2006/0076079 A1 Apr. 13, 2006

Related U.S. Application Data

(63) Continuation-in-part of application No. 10/981,060, filed on Nov. 4, 2004.

(60) Provisional application No. 60/517,296, filed on Nov. 4, 2003.

(51) **Int. Cl.**
B65B 1/04 (2006.01)

(52) **U.S. Cl.** **141/65**; 184/1.5; 188/352

(58) **Field of Classification Search** 141/65; 184/1.5; 74/481; 280/88; 188/352
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,299,668 A 4/1994 Youngers et al.
6,131,712 A 10/2000 Rhodenizer
6,302,167 B1 * 10/2001 Hollub 141/98
6,830,083 B1 * 12/2004 Hollub et al. 141/65
6,845,851 B1 1/2005 Donaldson et al.

* cited by examiner

Primary Examiner—Steven O. Douglas
(74) *Attorney, Agent, or Firm*—Quarles & Brady Steich Lang, LLP

(57) **ABSTRACT**

A Brake Flush Accelerator (BFA) selectively depresses a brake pedal while the master cylinder reservoir is under pressure from a brake flush machine, forcing fluid through the system at a very rapid rate. The BFA also provides a thorough flush as internal hydraulic pressure from the master cylinder can be used to exert force to remove contaminates from the brake system. The BFA exposes the low/no pressure area of the master cylinder to fluid flow from the pressurized master cylinder. When the brake pedal is depressed, a port in the master cylinder is opened which exposes the low/no pressure area of the master cylinder to fluid flow from the pressurized master cylinder reservoir. The BFA receives its pneumatic power from an air compressor or is easily adapted to a car tire. The BFA can be powered directly from the brake flush machine or attached to a vehicle's battery.

16 Claims, 3 Drawing Sheets