



(51) International Patent Classification:

B08B 3/02 (2006.01) **F02C 7/00** (2006.01)
B05D 1/04 (2006.01)

(21) International Application Number:

PCT/US2014/024573

(22) International Filing Date:

12 March 2014 (12.03.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/799,545 13 March 2013 (13.03.2013) US

(71) Applicant: **ECOSERVICES, LLC** [US/US]; 100 Great Meadow Road, Suite 202, Wethersfield, CT 06109 (US).

(72) Inventors: **DORSHIMER, Kurt**; 535 Harp Road, Fayetteville, GA 30215 (US). **WELCH, William, J.**; 17 Overseashore Drive West, Madison, CT 06443 (US). **RICE, Robert, M.**; 8503 Camille Drive, Huntsville, AL 35802 (US). **NORDLUND, Sebastian**; Hamngatan 29a, S-17266 Sundbyberg (SE). **ZADRICK, Wayne**; 39 Cold Springs Road, Bristol, CT 06010 (US).

(74) Agents: **ZUEGE, Austen et al.**; Kinney & Lange, P.A., 312 South Third Street, Minneapolis, MN 55415 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

26 February 2015

(54) Title: REAR MOUNTED WASH MANIFOLD AND PROCESS

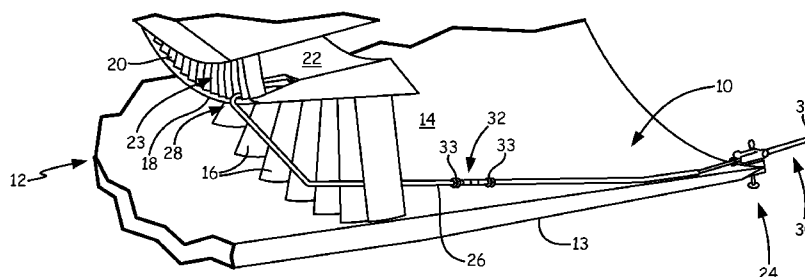


Fig. 1A

(57) Abstract: An engine wash manifold delivers wash liquid to an engine that includes an inlet, a fan, a case with an exhaust duct and a core inlet splitter. The manifold includes a wash delivery segment comprising a pipe shaped to follow at least in part engine case curvature with a first end to interface with the core inlet splitter and a second end with an inlet to receive wash fluid. The manifold further includes a retention system to secure the wash delivery segment to the engine and one or more nozzles on the first end of the wash delivery segment to spray wash fluid. The wash fluid may be atomized. The manifold further may include nozzles that deliver atomized wash liquid to the aft side of fan blades and may be used in conjunction with an inlet mounted manifold.

