(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
2 August 2012 (02.08.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/102925 A3

(51) International Patent Classification:
F02B 39/00 (2006.01) *F04D 29/40* (2006.01)
F01D 25/24 (2006.01)

(21) International Application Number:
PCT/US2012/021719

(22) International Filing Date:
18 January 2012 (18.01.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/014,503 26 January 2011 (26.01.2011) US

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(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, 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, IS, JP, KE, KG, KM, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, MD, 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, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TURBOCHARGER WITH REVERSED COMPRESSOR VOLUTE OPTIONALLY INTEGRATED INTO THE CENTER HOUSING

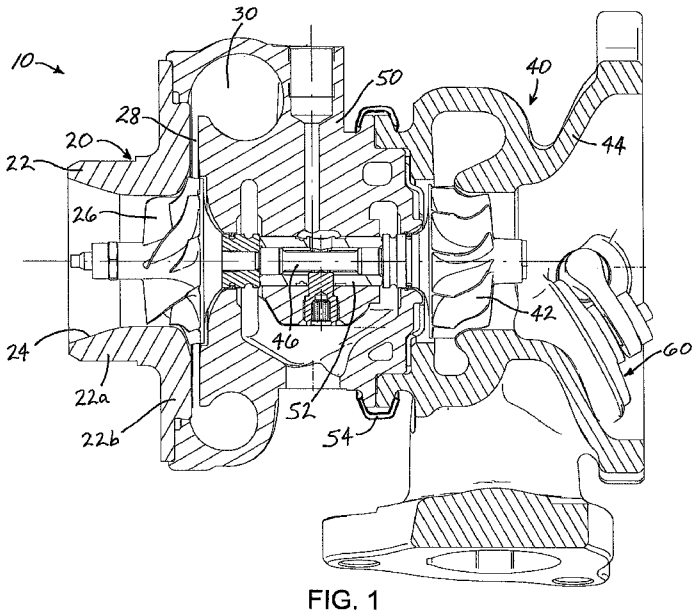


FIG. 1

(57) Abstract: A turbocharger includes a single-stage compressor formed by a single centrifugal compressor wheel in a compressor housing, a turbine formed by a turbine wheel in a turbine housing, and a center housing disposed between the compressor and turbine housings. The compressor includes a volute that receives pressurized air, via a diffuser, from the compressor wheel for onward delivery to an air intake of an engine. In one embodiment the compressor volute is reversed relative to a conventional location, such that the volute is displaced to the turbine side of the diffuser rather than to the compressor side. In another embodiment the compressor volute (whether reversed or not) is integrated into the center housing and accordingly the compressor housing is a simple cap having a tubular portion that defines an inlet to the compressor and a flange portion that connects to the center housing.

WO 2012/102925 A3

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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:
18 October 2012

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/021719

A. CLASSIFICATION OF SUBJECT MATTER

F02B 39/00(2006.01)i, F01D 25/24(2006.01)i, F04D 29/40(2006.01)i

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)

F02B 39/00; F04B 17/00; F01D 25/16; F04B 35/00; F01D 25/24; F02C 7/06

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: turbocharger,compressor, housing, turbine, shaft, volute, centrifugal,stage

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2005-0069427 A1 (CHRISTIANE ROEMUSS et al.) 31 March 2005 See the abstract, paragraphs 0012-0016, figure 1	1,2,3,8,9 4-7
A	JP 60-173316 A (NISSAN MOTOR CO LTD) 06 September 1985 See the abstract, pages 1-2, figure 1	1-9
A	US 6425743 B1 (FISCHER; CHRISTIAN) 30 July 2002 See the abstract, column 2 line 50 - column 3 line 8, figure 1	1-9
A	US 6715288 B1 (BERTHOLD ENGELS et al.) 01 April 2004 See the abstract, column 2 line 36 - column 3 line 4, figure 1	1-9

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

☒ See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
27 AUGUST 2012 (27.08.2012)	**28 AUGUST 2012 (28.08.2012)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan City, 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer LEE, TAEK SANG Telephone No. 82-42-481-5492

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/021719

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