

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 June 2009 (18.06.2009)

PCT

(10) International Publication Number
WO 2009/076130 A3

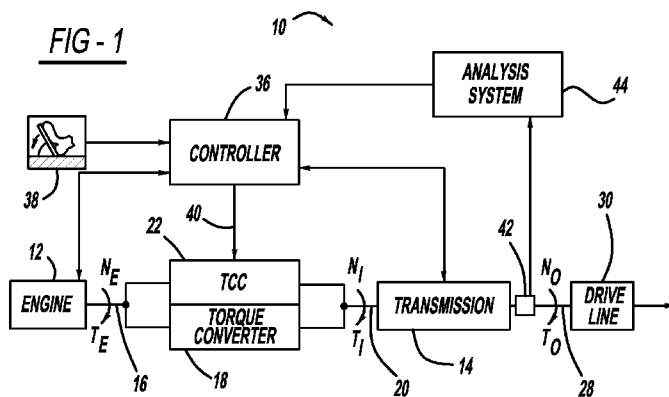
- (51) International Patent Classification:
F16H 61/14 (2006.01) F16H 59/36 (2006.01)
- (21) International Application Number:
PCT/US2008/085377
- (22) International Filing Date:
3 December 2008 (03.12.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/012,194 7 December 2007 (07.12.2007) 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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, 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:
20 August 2009

(54) Title: AGGRESSIVE TORQUE CONVERTER CLUTCH SLIP CONTROL DESIGN THROUGH DRIVELINE TORSIONAL VELOCITY MEASUREMENTS



(57) Abstract: A system and method for setting the slip of a torque converter for a plurality of selected engine speeds and transmission gears. The method includes populating a table off-line, typically using a dynamometer, with torque converter slips for a plurality of selected engine speeds and transmission gears. A speed sensor is used to measure vibrations transmitted through the torque converter to the driveline of the vehicle. The sensor signal is sent to an analyzing system where it is converted to the frequency domain. A separate minimum slip value for each selected engine speed and transmission gear is stored in a table so that during vehicle operation, a controller will instruct the torque converter clutch to set the desired converter slip for the current engine speed and transmission gear provided for a particular throttle position and/or engine torque.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/085377**A. CLASSIFICATION OF SUBJECT MATTER***F16H 61/14(2006.01)i, F16H 59/36(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
IPC 8 F16HDocumentation 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 since 1975
Japanese Utility models and applications for Utility models since 1975Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
e-KIPASS (KIPO internal)**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 10-019119 A (NISSAN MOTOR CO LTD) 23.01.1998 see the abstract and paragraph [0032] ~ [0046], fig 6.	1-21
A	JP 3518648 B2 (NISSAN MOTOR CO LTD) 06.02.2004 see the abstract and fig 6 & 8.	1-21
A	JP 2626393 B2 (TOYOTA MOTOR CORP) 11.04.1997 see the abstract and fig 6 & 9.	1-21

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

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

22 MAY 2009 (22.05.2009)

Date of mailing of the international search report

06 JULY 2009 (06.07.2009)

Name and mailing address of the ISA/KR

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Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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Telephone No. 82-42-481-5458



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/085377

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 10-019119 A	23.01.1998	NONE	
JP 3518648 B2	06.02.2004	JP 09-287658 A	04.11.1997
JP 2626393 B2	11.04.1997	JP 05-180330 A	20.07.1993