HYDROMECHANICAL CONTINUOUSLY VARIABLE TRANSMISSION

A hydromechanical continuously variable power transmission (Figs. 1 and 2) for converting rotating mechanical power at one combination of rotational velocity and torque to another combination of rotational velocity and torque over a continuous range, include a hydraulic pump (30), operatively driven by an input shaft (50), and a hydraulic motor (35) operatively driving an output shaft (51). The hydraulic pump (30) and hydraulic motor (35) are coupled together mechanically through a pair of planet sets (40, 45), and are coupled together hydraulically through a manifold (52), such that hydraulic fluid pressurized by said pump (30) drives the motor (35) and spent fluid from the motor (35) is cycled back to the pump (30) where it is re-pressurized. Both planet sets (40, 45) are arranged axially with the input shaft (50) and the output shaft (51), and the hydraulic pump (30) and hydraulic motor (35) are arranged in series with each other on opposite sides of the manifold (52), and parallel to the input and output shafts (50, 51), thereby optimizing the use space and keeping the overall length of the transmission to a minimum, and minimizing required lengths of said input and output shafts (50, 51).
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC: F16H 47/04 (2006.01)

USPC: 475/72,73,78,80
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)
U.S.: 475/72,73,78,80

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
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<tr>
<td>A</td>
<td>US 3,897,697 A (CHAMBERS et al) 05 August 1975 (05.08.1975), column 4-11.</td>
<td>1-39</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search
06 September 2006 (06.09.2006)

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (571) 273-3201

Form PCT/ISA/210 (second sheet) (April 2005)