Title (en)

MULTI-SPEED GEARBOX

Title (de

MEHRSTUFENGETRIEBE

Title (fr)

BOÎTE DE VITESSES MULTI-ÉTAGÉE

Publication

EP 2864665 A1 20150429 (DE)

Application

EP 13722430 A 20130514

Priority

- DE 102012210831 A 20120626
- EP 2013059876 W 20130514

Abstract (en)

[origin: WO2014000941A1] The invention relates to a multi-speed gearbox having four planetary gear sets (P1, P2, P3, P4), eight rotatable shafts (1, 2, 3, 4, 5, 6, 7, 8) and six shift elements (03, 04, 18, 38, 45, 46, 56, 57), wherein the sun gear of the first planetary gear set (P1) is connected to the input shaft (1), which is connected to the sun gear of the third planetary gear set (P3) and can be coupled to the eighth shaft (8) which is connected to the planet carrier of the fourth planetary gear set (P4) by means of a first clutch (18). The eighth shaft (8) can be connected to the third shaft (3) by means of a second clutch (38), which connects to the planet carrier of the third planetary gear set (P3) and can be coupled to the planet carrier of the first planetary gear set (P1) by means of a first brake (03), which is coupled to the housing (G). The fourth shaft (4) connects to the sun gear of the second planetary gear set (P2) and can be coupled to the planet carrier of the first planetary gear set (P1) by means of a second brake (04), and the seventh shaft (7) connects to the ring gear of the first planetary gear set (P1) and can be connected to the fifth shaft (5) which is connected to the ring gear of the second planetary gear set (P2) and to the ring gear of the third planetary gear set (P3), the output shaft (2) is connected to the ring gear of the fourth planetary gear set (P4) and the closing of a fourth, fifth or sixth clutch (45, 46, 56), which are also provided, can block the second planetary gear set (P2).

IPC 8 full level

F16H 3/66 (2006.01)

CPC (source: CN EP US)

F16H 3/666 (2013.01 - CN EP US); F16H 2200/0069 (2013.01 - CN EP US); F16H 2200/2012 (2013.01 - CN EP US); F16H 2200/2046 (2013.01 - CN EP US); F16H 2200/2094 (2013.01 - CN EP US); F16H 2200/2097 (2013.01 - CN EP US)

Citation (search report)

See references of WO 2014000941A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102012210831 A1 20140102; CN 104395641 A 20150304; CN 104395641 B 20161214; EP 2864665 A1 20150429; US 2015184723 A1 20150702; US 9441710 B2 20160913; WO 2014000941 A1 20140103

DOCDB simple family (application)

DE 102012210831 A 20120626; CN 201380032791 A 20130514; EP 13722430 A 20130514; EP 2013059876 W 20130514; US 201314410700 A 20130514