

Title (en)
MULTI-SPEED GEARBOX

Title (de)
MEHRSTUFENGETRIEBE

Title (fr)
BOÎTE DE VITESSES MULTI-ÉTAGÉE

Publication
EP 2841805 A1 20150304 (DE)

Application
EP 13709880 A 20130313

Priority
• DE 102012206817 A 20120425
• EP 2013055071 W 20130313

Abstract (en)
[origin: WO2013159999A1] 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, 05, 14, 17, 8), wherein the sun gear of the first planetary gear set (P1) is connected to the eighth shaft (8), which is connected to the sun gear of the second planetary gear set (P2) and can be connected to the drive shaft (1) by means of a third clutch (18). The drive shaft (1) can be connected to the fourth shaft (4) by means of a first clutch (14), which connects to the ring gear of the first planetary gear set (P1) and can be coupled to the housing (G) by means of a second brake (04). The drive shaft (1) can be connected to the seventh shaft (7) which is connected to the seventh shaft (7) which is connected to the planet carrier of the fourth planetary gear set (P4) and to the ring gear of the third planetary gear set (P3) by means of a second clutch (17). The sixth shaft (6) is connected to the ring gear of the first planetary gear set (P1), to the planet carrier of the second planetary gear set (P2) and to the ring gear of the fourth planetary gear set (P4), the third shaft (3) is connected to the sun gear of the third planetary gear set (P3) and to the sun gear of the fourth planetary gear set (P4) can be coupled to the housing (G) by means of a first brake (03). The fifth shaft (5) is connected to the ring gear of second planetary gear set (P2) and can be coupled to the housing (G) by means of a third brake (05). The output shaft (2) is connected to the planet carrier of the third planetary gear set (P3).

IPC 8 full level
F16H 3/66 (2006.01)

CPC (source: CN EP US)
F16H 3/66 (2013.01 - EP US); **F16H 3/663** (2013.01 - CN); **F16H 2003/445** (2013.01 - EP US); **F16H 2200/0065** (2013.01 - EP US); **F16H 2200/0082** (2013.01 - US); **F16H 2200/2012** (2013.01 - EP US); **F16H 2200/2046** (2013.01 - EP US); **F16H 2200/2094** (2013.01 - EP US)

Citation (search report)
See references of WO 2013159999A1

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)
WO 2013159999 A1 20131031; CN 104254710 A 20141231; CN 104254710 B 20160907; DE 102012206817 A1 20131031; DE 102012206817 B4 20210311; EP 2841805 A1 20150304; US 2015119187 A1 20150430; US 9234569 B2 20160112

DOCDB simple family (application)
EP 2013055071 W 20130313; CN 201380021966 A 20130313; DE 102012206817 A 20120425; EP 13709880 A 20130313; US 201314396078 A 20130313