

Title (en)
9-SPEED PLANETARY GEARBOX

Title (de)
9-GANG PLANETENGETRIEBE

Title (fr)
BOÎTE DE VITESSES À TRAINS PLANÉTAIRES À 9 RAPPORTS

Publication
EP 2923112 A1 20150930 (DE)

Application
EP 13780148 A 20131024

Priority

- DE 102012221238 A 20121121
- EP 2013072224 W 20131024

Abstract (en)
[origin: WO2014079641A1] The invention relates to a gearbox comprising one input shaft (1), one output shaft (2), a casing (G), a first planetary gear set (PR1), a second planetary gear set (PR2) and a third planetary gear set (PR3), six shift elements, comprising a first brake (B1), a second brake (B2), and a first clutch (K1), a second clutch (K2), a third clutch (K3, K3', K3'', K3''') and a fourth clutch (K4, K1'), wherein the shift elements can be actuated selectively, whereby nine forward gears and one reverse gear can be achieved by different transmission ratios between the input shaft (1) and the output shaft (2). Each planetary gear set (PR1, PR2, PR3) comprises at least one sun gear (S1, S2, S3), one planet gear, one planet carrier (PT1, PT2, PT3) and one ring gear (H1, H2, H3). The gearbox is characterized in that the input shaft (1) and the output shaft (2) are arranged axially offset to one another and the input shaft (1) can be connected via the first clutch (K1) to the sun gear (S1) of the first planetary gear set (PR1) and via the second clutch (K2) to the first brake (B1) and the ring gear (H2) of the second planetary gear set (PR2), wherein the ring gear (H2) of the second planetary gear set (PR2) and the first brake (B1) are also connected together.

IPC 8 full level
F16H 3/66 (2006.01)

CPC (source: CN EP US)
F16H 3/66 (2013.01 - CN EP US); **F16H 2003/442** (2013.01 - CN EP US); **F16H 2200/0008** (2013.01 - CN EP US);
F16H 2200/0065 (2013.01 - CN EP US); **F16H 2200/201** (2013.01 - CN EP US); **F16H 2200/2046** (2013.01 - CN EP US)

Citation (search report)
See references of WO 2014079641A1

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 102012221238 A1 20140522; CN 104822969 A 20150805; CN 104822969 B 20181228; EP 2923112 A1 20150930;
US 2015300457 A1 20151022; US 9394974 B2 20160719; WO 2014079641 A1 20140530

DOCDB simple family (application)
DE 102012221238 A 20121121; CN 201380060500 A 20131024; EP 13780148 A 20131024; EP 2013072224 W 20131024;
US 201314646607 A 20131024