

Title (en)
MULTI-SPEED GEARBOX

Title (de)
MEHRSTUFENGETRIEBE

Title (fr)
BOÎTE DE VITESSES MULTI-ÉTAGÉE

Publication
EP 2909506 A1 20150826 (DE)

Application
EP 13756489 A 20130904

Priority
• DE 102012218898 A 20121017
• EP 2013068240 W 20130904

Abstract (en)
[origin: WO2014060142A1] The invention relates to a multi-speed gearbox with a planetary design, particularly an automatic gearbox for a motor vehicle, comprising: a drive shaft (1) and an output shaft (2) which are arranged in a housing (G); four planetary gear sets (P1, P2, P3, P4), each comprising at least one sun gear, a planet carrier and a ring gear; and at least six shifting elements (03, 05, 07, 13, 16, 18), comprising a first brake (03), a second brake (05) and a third brake (07), and a first clutch (13), a second clutch (16) and a third clutch (18). The selective engagement thereof effects different transmission ratios between the drive shaft (1) and the output shaft (2) and therefore at least nine forward speeds and one reverse speed can be realised. The planet carriers of the second and fourth planetary gear sets (P2, P4) are radially offset relative to the planet carriers of the first and the third planetary gear sets.

IPC 8 full level
F16H 3/66 (2006.01); **F16H 3/44** (2006.01); **F16H 37/04** (2006.01)

CPC (source: CN EP US)
F16H 3/66 (2013.01 - CN EP US); **F16H 2003/442** (2013.01 - CN EP US); **F16H 2003/445** (2013.01 - US);
F16H 2200/0065 (2013.01 - CN EP US); **F16H 2200/2012** (2013.01 - CN EP US); **F16H 2200/2046** (2013.01 - CN EP US);
F16H 2200/2064 (2013.01 - CN EP US); **F16H 2200/2094** (2013.01 - CN EP US)

Citation (search report)
See references of WO 2014060142A1

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 102012218898 A1 20140417; CN 104769322 A 20150708; EP 2909506 A1 20150826; US 2016040755 A1 20160211;
WO 2014060142 A1 20140424

DOCDB simple family (application)
DE 102012218898 A 20121017; CN 201380058421 A 20130904; EP 13756489 A 20130904; EP 2013068240 W 20130904;
US 201314436556 A 20130904