

Title (en)

MOTOR VEHICLE STARTER PINION WITH IMPROVED ACOUSTIC PERFORMANCE

Title (de)

KRAFTFAHRZEUGANLASSERRITZEL MIT VERBESSERTER AKUSTIKLEISTUNG

Title (fr)

PIGNON DE DÉMARREUR DE VÉHICULE AUTOMOBILE À PERFORMANCES ACOUSTIQUES AMÉLIORÉES

Publication

EP 3426949 A1 20190116 (FR)

Application

EP 17710780 A 20170223

Priority

- FR 1651952 A 20160309
- FR 2017050404 W 20170223

Abstract (en)

[origin: WO2017153656A1] The invention relates mainly to an assembly comprising: – a combustion engine ring gear having a plurality of teeth, the said ring gear being defined by a modulus and a pressure angle, – a starter comprising a pinion (31) able to engage with the said ring gear of the said combustion engine, the said pinion (31) having a plurality of teeth (42) is defined by a modulus (Mp) and a pressure angle (alpha_p), characterized in that a pinion product which is the product of the modulus (Mp) of the said pinion (31) and the cosine of the pressure angle (alpha_p) of the said pinion (31) is greater than a ring-gear product equal to the product of the modulus of the said ring gear and the cosine of the pressure angle of the said ring gear.

IPC 8 full level

F16H 55/08 (2006.01); **C21D 9/32** (2006.01); **F02N 11/00** (2006.01); **F02N 11/10** (2006.01); **F02N 15/06** (2006.01)

CPC (source: EP US)

F02N 15/062 (2013.01 - EP US); **F02N 15/067** (2013.01 - EP US); **F16H 1/10** (2013.01 - US); **F16H 55/0873** (2013.01 - EP US); **F16H 55/088** (2013.01 - EP US); **F16H 55/17** (2013.01 - US); **F16H 55/18** (2013.01 - EP US); **C21D 9/32** (2013.01 - EP); **F02N 11/00** (2013.01 - EP US); **F16H 2055/176** (2013.01 - US)

Citation (search report)

See references of WO 2017153656A1

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 2017153656 A1 20170914; CN 108700175 A 20181023; CN 108700175 B 20220419; EP 3426949 A1 20190116; FR 3048734 A1 20170915; FR 3048734 B1 20190705; US 10900457 B2 20210126; US 2019085811 A1 20190321

DOCDB simple family (application)

FR 2017050404 W 20170223; CN 201780014035 A 20170223; EP 17710780 A 20170223; FR 1651952 A 20160309; US 201716082595 A 20170223