

Title (en)
COMBUSTION APPARATUS WITH FUEL PRE-HEATING

Title (de)
VERBRENNUNGSVORRICHTUNG MIT BRENNSTOFFVORERWÄRMUNG

Title (fr)
APPAREIL DE COMBUSTION AVEC PRECHAUFFAGE DE CARBURANT

Publication
EP 2019921 A2 20090204 (EN)

Application
EP 07732303 A 20070404

Priority

- GB 2007001255 W 20070404
- GB 0606813 A 20060405
- GB 0704149 A 20070305

Abstract (en)

[origin: GB2436855A] A combustion apparatus such as a diesel engine (16) has an air inlet system (20,22) through which air can be drawn air from the atmosphere to the engine, a fuel supply system (28,30,32) for supplying fuel to the engine, an exhaust system (34,36,38,40,42) for exhausting combustion gas from the engine to the atmosphere and an exhaust gas recirculation system (44,46) for feeding a proportion of the exhaust gas from the exhaust system to the air inlet system so as to reduce NO and NO2 emissions by the engine. A heat exchanger (48) is provided between the exhaust gas recirculation system and the fuel supply system so that, in use, heat is transferred from the recirculating exhaust gas to the fuel not only so as to cool the recirculating exhaust gas and thus enhance the reduction of NO and NO2 emissions but also so as to warm the fuel and thus improve the combustion efficiency of the engine. In a front-engined motor vehicle, the heat exchanger can conveniently be disposed beneath the vehicle so as not to take up space in the vehicle's engine compartment.

IPC 8 full level
F02M 25/07 (2006.01); **F02M 27/08** (2006.01); **F02M 31/14** (2006.01)

CPC (source: EP GB US)
F01N 5/02 (2013.01 - EP US); **F01N 13/009** (2014.06 - EP US); **F02M 26/28** (2016.02 - EP US); **F02M 26/30** (2016.02 - EP US); **F02M 26/32** (2016.02 - EP US); **F02M 31/08** (2013.01 - EP US); **F02M 31/14** (2013.01 - EP US); **F02M 31/16** (2013.01 - EP GB US); **F02M 53/02** (2013.01 - EP US); **F01N 2230/04** (2013.01 - EP US); **F01N 2410/00** (2013.01 - EP US); **F02B 3/06** (2013.01 - EP US); **F02M 26/15** (2016.02 - EP US); **F02M 26/25** (2016.02 - EP US); **F02M 2026/004** (2016.02 - EP US); **Y02T 10/12** (2013.01 - EP US)

Citation (search report)
See references of WO 2007113569A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
GB 0606813 D0 20060517; **GB 2436855 A 20071010**; EP 2019921 A2 20090204; GB 0704149 D0 20070411; US 2009176178 A1 20090709; WO 2007113569 A2 20071011; WO 2007113569 A3 20071129

DOCDB simple family (application)
GB 0606813 A 20060405; EP 07732303 A 20070404; GB 0704149 A 20070305; GB 2007001255 W 20070404; US 29610107 A 20070404