

Title (en)

STRUCTURE OF PROTECTIVE MEMBER FOR VEHICLE HEAT EXCHANGER

Title (de)

STRUKTUR EINES SCHUTZGLIEDS FÜR EINEN FAHRZEUGWÄRMETAUSCHER

Title (fr)

STRUCTURE D'UN ÉLÉMENT DE PROTECTION POUR ÉCHANGEUR DE CHALEUR DE VÉHICULE

Publication

EP 2011976 A1 20090107 (EN)

Application

EP 07740812 A 20070402

Priority

- JP 2007057376 W 20070402
- JP 2006120316 A 20060425

Abstract (en)

A protect structure, of a heat exchanger (1) for a motor vehicle, includes a core part (2) of the heat exchanger (1) and a protect member (20). The core part (2) has a plurality of tubes (5) and fins (6) that are alternately arranged with each other, and the protect member (20) is provided at a front side of the core part (2). The protect member (20) has a plurality of protecting portions (21: 30) extending in a longitudinal direction of the tubes (5) to cover front sides of the tubes (5) of the core part (2) and avoid a collision between the core part (2) and an attack object (X) that is flown from an oblique front side of the motor vehicle toward the core part (2).

IPC 8 full level

F01P 3/18 (2006.01); **B60K 11/04** (2006.01); **F01P 11/14** (2006.01); **F28F 1/40** (2006.01); **F28F 9/00** (2006.01)

CPC (source: EP US)

F28D 1/0333 (2013.01 - EP US); **F28F 3/025** (2013.01 - EP US); **F28F 19/002** (2013.01 - EP US); **F28F 2265/00** (2013.01 - EP US)

Citation (search report)

See references of WO 2007125727A1

Cited by

FR3079453A1; FR3073453A1; FR3035955A1; CN107810379A; CN107701290A; FR3060106A1; US11255617B2; WO2018202632A1; WO2018202631A1; WO2016177831A1; WO2018109367A1; EP2445377B1; US10605547B2

Designated contracting state (EPC)

DE FR GB

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 2011976 A1 20090107; JP 2007291937 A 20071108; US 2009126916 A1 20090521; WO 2007125727 A1 20071108

DOCDB simple family (application)

EP 07740812 A 20070402; JP 2006120316 A 20060425; JP 2007057376 W 20070402; US 29435607 A 20070402