

Title (en)
AUTOMOTIVE HEAT EXCHANGER

Title (de)
AUTOMOBILWÄRMETAUSCHER

Title (fr)
ECHANGEUR THERMIQUES D'AUTOMOBILE

Publication
EP 1904802 A1 20080402 (EN)

Application
EP 06762385 A 20060704

Priority
• EP 2006006494 W 20060704
• EP 05076629 A 20050715
• EP 06075304 A 20060213
• EP 06762385 A 20060704

Abstract (en)
[origin: WO2007009588A1] The invention relates to an automotive heat exchanger comprising a) a heat exchange core (2) comprising a header part (10) comprising a plurality of heat transfer tubes (4), b) a plastic manifold body (18) forming an aperture for receiving end portions of heat transfer tubes (4), and c) a plastic insert plate (16) having a plurality of openings (24), wherein i) end portions of the heat transfer tubes (4) are received by and extend through the openings (24) of the plastic insert plate (16) and extreme parts of the end portions of the heat transfer tubes (4) have been bended outwardly, ii) the plastic insert plate (16) is fastened to the side walls of the manifold body (18), and iii) the manifold body (18) is joined to the heat exchange core (2) only through fastening of the plastic insert plate (16) to the manifold body (18).

IPC 8 full level
F28F 9/02 (2006.01); **F28F 9/16** (2006.01); **F28F 21/06** (2006.01)

CPC (source: EP KR US)
F28F 9/02 (2013.01 - KR); **F28F 9/0229** (2013.01 - EP US); **F28F 9/16** (2013.01 - KR); **F28F 9/165** (2013.01 - EP US); **F28F 21/06** (2013.01 - KR); **F28F 21/067** (2013.01 - EP US); **Y10T 29/49373** (2015.01 - EP US)

Citation (search report)
See references of WO 2007009588A1

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 NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2007009588 A1 20070125; WO 2007009588 A8 20070531; BR PI0612998 A2 20101214; EP 1904802 A1 20080402; JP 2009501309 A 20090115; KR 20080033942 A 20080417; TW 200710364 A 20070316; US 2009139703 A1 20090604

DOCDB simple family (application)
EP 2006006494 W 20060704; BR PI0612998 A 20060704; EP 06762385 A 20060704; JP 2008520755 A 20060704; KR 20087001081 A 20080114; TW 95122693 A 20060623; US 99492406 A 20060704