

Title (en)  
ENGINE COOLING APPARATUS

Title (de)  
MOTORKÜHLUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE REFROIDISSEMENT DE MOTEUR

Publication  
**EP 2653687 A1 20131023 (EN)**

Application  
**EP 10860673 A 20101213**

Priority  
JP 2010072416 W 20101213

Abstract (en)  
A cooling apparatus 1A is equipped with a cylinder block 51 in which W/J 501 is provided and a cylinder head 52 in which W/J 502 is provided. The first W/J 501 causes cooling water to flow through an exhaust-side portion of the cylinder block 51. Further, the first W/J 501 causes the cooling water to flow through an exhaust-side portion of the cylinder head 52 including a predetermined region around a spark plug 54. The second W/J 502 is incorporated into a second circulation path C2 different from a first circulation path C1 into which the first W/J 501 is incorporated. The second W/J 502 causes the cooling water to flow through an intake-side portion of the cylinder block 51. Further, the second W/J 502 causes the cooling water to flow through an intake-side portion of the cylinder head 52.

IPC 8 full level  
**F01P 3/02** (2006.01)

CPC (source: EP US)  
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