

Title (en)
Valve guard retention device

Title (de)
Ventilschutzbefestigungsvorrichtung

Title (fr)
Dispositif de retenue de protection de soupape

Publication
EP 2664839 A3 20170726 (EN)

Application
EP 13168084 A 20130516

Priority
GB 201208765 A 20120517

Abstract (en)
[origin: EP2664839A2] A device for retaining valve guards on cylinders. The device comprises an interface feature which is arranged to couple with a retention feature of an associated cylinder valve assembly thereby preventing uncontrolled separation of the retention device from the cylinder. The retention device may be a separate component or integral with the valve guard.

IPC 8 full level
F17C 13/00 (2006.01)

CPC (source: EP GB)
F17C 13/005 (2013.01 - EP); **F17C 13/04** (2013.01 - GB); **F17C 13/123** (2013.01 - GB); **F17C 2201/0109** (2013.01 - EP);
F17C 2201/056 (2013.01 - EP); **F17C 2201/058** (2013.01 - EP); **F17C 2205/0165** (2013.01 - EP); **F17C 2205/0308** (2013.01 - EP);
F17C 2205/0329 (2013.01 - EP)

Citation (search report)

- [X] DE 10308676 A1 20040909 - OPEL ADAM AG [DE]
- [X] US 2009301581 A1 20091210 - MACNEAL JAMES R [US], et al
- [X] US 7089956 B1 20060815 - DAVIDSON GILBERT [US], et al
- [X] EP 2330335 A1 20110608 - VETTER GMBH [DE]
- [X] FR 2855244 A1 20041126 - AIR LIQUIDE [FR]
- [X] US 6311722 B1 20011106 - GOUNOT ETIENNE [FR], et al
- [X] DE 10146457 A1 20030424 - MESSER CUTTING & WELDING GMBH [DE]

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)
EP 2664839 A2 20131120; EP 2664839 A3 20170726; CA 2815873 A1 20131117; GB 201208765 D0 20120704; GB 2505635 A 20140312

DOCDB simple family (application)
EP 13168084 A 20130516; CA 2815873 A 20130515; GB 201208765 A 20120517