Title (en)

METHOD FOR OPTIMIZING RESPONSE TIME OF HYDRAULIC LATCH-PIN IN CYLINDER DEACTIVATION ROCKER ARM

Title (de)

VERFAHREN ZUR OPTIMIERUNG DER ANTWORTZEIT EINES HYDRAULISCHEN RASTSTIFTES FÜR EINEN KIPPHEBEL ZUR ZYLINDERABSCHALTUNG

Title (fr)

PROCÉDÉ POUR OPTIMISER LE TEMPS DE RÉPONSE D'UNE TIGE DE VERROUILLAGE DANS UN BRAS DE CULBUTEUR DE DÉSACTIVATION DES CYLINDRES

Publication

EP 3039256 A4 20170419 (EN)

Application

EP 14840581 A 20140902

Priority

- US 201361872621 P 20130830
- US 201361872624 P 20130830
- US 201361898475 P 20131101
- US 2014053689 W 20140902

Abstract (en)

[origin: WO2015031887A1] A method for optimizing response time of a latch in a cylinder deactivation rocker arm assembly is provided. The latch is configured to move between an engaged position with an inner arm of the rocker arm assembly and a retracted position. A major outer diameter (L1) of the latch is determined. An installed length (L2) of a spring biasing the latch is determined. A clearance (L3) between L1 and a major inner diameter of an outer arm of the rocker arm assembly is determined. A radial clearance (L4) between a cage coupled to the outer arm and a major inner diameter of the latch is determined. A minor diameter (L5) of the latch is determined. A relationship between the response time of the latch and L1, L2, L3, L4 and L5 is established. Components of the cylinder deactivation rocker arm assembly are selected based on the relationship.

IPC 8 full level

F01L 1/18 (2006.01); **F01L 1/255** (2006.01); **F01L 13/00** (2006.01)

CPC (source: EP US)

F01L 1/18 (2013.01 - EP US); **F01L 13/0005** (2013.01 - EP US); F01L 2303/00 (2020.05 - EP US); F01L 2305/00 (2020.05 - EP US)

Citation (search report)

- [A] US 2007193543 A1 20070823 - BEST RICHARD R [US]
- See references of WO 2015031887A1

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

DOCDB simple family (publication)

WO 2015031887 A1 20150305; CN 105378236 A 20160302; CN 105378236 B 20181012; EP 3039256 A1 20160706; EP 3039256 A4 20170419; EP 3039256 B1 20180321; US 2016169064 A1 20160616

DOCDB simple family (application)

US 2014053689 W 20140902; CN 201480037996 A 20140902; EP 14840581 A 20140902; US 201615053231 A 20160225