

Title (en)

METHOD AND MONITORING SYSTEM OF A HYDRAULIC CIRCUIT OF A WORK VEHICLE

Title (de)

VERFAHREN UND ÜBERWACHUNGSSYSTEM EINES HYDRAULIKKREISLAUFS EINES ARBEITSFAHRZEUGS

Title (fr)

PROCÉDÉ ET SYSTÈME DE SURVEILLANCE D'UN CIRCUIT HYDRAULIQUE D'UN VÉHICULE DE TRAVAIL

Publication

EP 4155555 A1 20230329 (EN)

Application

EP 22197875 A 20220926

Priority

IT 202100024707 A 20210927

Abstract (en)

Method of a hydraulic circuit of a work vehicle, the vehicle comprising a hydraulic circuit (HC) operatively connected to a fixed displacement hydraulic pump (P) and a prime mover arranged to drive the hydraulic pump in rotation, a hydraulic actuator (A1) arranged to be fed by the hydraulic circuit through an open center directional solenoid valve (V), in which the actuator comprises a movable shaft, and a control lever (JOYSTICK) arranged to control an opening of the solenoid valve, the valve assuming a position of zero opening in which all the flow of the pump is sent to a hydraulic tank (T), and a position of maximum opening in which all the flow generated by the hydraulic pump is sent to the hydraulic actuator (A1), the method comprising the calculation of the efficiency (η) of the hydraulic pump as a ratio of an effective flow rate (Q_r) and a nominal flow rate (Q_n) of the hydraulic pump, where the effective flow is calculated according to the displacement of the actuator shaft.

IPC 8 full level

F15B 11/042 (2006.01); **E02F 9/22** (2006.01); **F15B 19/00** (2006.01); **F15B 13/04** (2006.01)

CPC (source: EP)

E02F 9/207 (2013.01); **E02F 9/2228** (2013.01); **E02F 9/226** (2013.01); **E02F 9/2282** (2013.01); **E02F 9/267** (2013.01); **F15B 11/0423** (2013.01); **F15B 19/005** (2013.01); **E02F 9/205** (2013.01); **F15B 2013/0409** (2013.01); **F15B 2211/20515** (2013.01); **F15B 2211/20523** (2013.01); **F15B 2211/20538** (2013.01); **F15B 2211/3116** (2013.01); **F15B 2211/3138** (2013.01); **F15B 2211/3144** (2013.01); **F15B 2211/327** (2013.01); **F15B 2211/633** (2013.01); **F15B 2211/6336** (2013.01); **F15B 2211/634** (2013.01); **F15B 2211/6346** (2013.01); **F15B 2211/6651** (2013.01); **F15B 2211/6654** (2013.01); **F15B 2211/7053** (2013.01); **F15B 2211/8633** (2013.01); **F15B 2211/8636** (2013.01)

Citation (search report)

- [A] JP 2020076223 A 20200521 - YANMAR CO LTD
- [A] WO 2020175399 A1 20200903 - TADANO LTD [JP], et al

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4155555 A1 20230329; IT 202100024707 A1 20230327

DOCDB simple family (application)

EP 22197875 A 20220926; IT 202100024707 A 20210927