

Title (en)  
METHOD FOR WEAR DETECTION AND PREDICTIVE WEAR PROGNOSIS OF ELECTROMECHANICAL ACTUATORS IN RELATION TO THE OPERATING TIME OF A MACHINE WITH COMBUSTION ENGINE

Title (de)  
VERFAHREN ZUR VERSCHLEISSERKENNUNG UND PRÄDIKTIVEN VERSCHLEISSPROGNOSE VON ELEKTROMECHANISCHEN AKTUATOREN ZUR BETRIEBSZEIT EINER MASCHINE MIT VERBRENNUNGSMOTOR

Title (fr)  
PROCÉDÉ DE DÉTECTION D'USURE ET DE PRONOSTIC PRÉDICTIF D'USURE D'ACTIONNEURS ÉLECTROMÉCANIQUES PAR RAPPORT AU TEMPS DE FONCTIONNEMENT D'UNE MACHINE À MOTEUR À COMBUSTION INTERNE

Publication  
**EP 3807512 A1 20210421 (DE)**

Application  
**EP 19731596 A 20190606**

Priority  
• DE 102018004805 A 20180618  
• DE 102019001627 A 20190308  
• EP 2019000177 W 20190606

Abstract (en)  
[origin: WO2019242876A1] 1. Method for wear detection and predictive wear prognosis of electromechanical actuators in relation to the operating time of a machine with combustion engine 2. A method for wear detection and predictable wear prognosis of electromechanical actuators (in particular throttle flap, exhaust-gas recirculation valve, exhaust-gas flap and overpressure valve at the turbocharger, or others) in relation to the operating time of a machine with combustion engine with at least one engine control unit, comprising a first measuring method for identifying the actuator wear in the form of movement profiles and the number of different actuator movements within individual movement profiles, wherein the number of different actuator movements is compared with reference data, and a second measuring method which identifies production errors through stimulation of the electromechanical actuators with a step change and measurement and evaluation of the step change response, or the settling time of the actual position in relation to the setpoint position.

IPC 8 full level  
**F02D 41/14** (2006.01); **F02D 41/22** (2006.01); **F02D 41/24** (2006.01); **F02M 26/49** (2016.01); **F02M 26/54** (2016.01); **G01M 15/04** (2006.01); **G05B 23/02** (2006.01)

CPC (source: EP)  
**F02D 41/221** (2013.01); **F02D 41/2464** (2013.01); **G01M 15/04** (2013.01); **F02D 2041/1412** (2013.01); **F02D 2041/1423** (2013.01); **F02M 26/49** (2016.02); **F02M 26/54** (2016.02); **G05B 23/0283** (2013.01); **Y02T 10/40** (2013.01)

Citation (search report)  
See references of WO 2019242876A1

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)  
**DE 102019001627 A1 20191219**; EP 3807512 A1 20210421; WO 2019242876 A1 20191226

DOCDB simple family (application)  
**DE 102019001627 A 20190308**; EP 19731596 A 20190606; EP 2019000177 W 20190606