

Title (en)
DEVICE FOR ADJUSTING THE ANGLE OF ROTATION OF A CAMSHAFT OF AN INTERNAL COMBUSTION ENGINE RELATIVE TO A DRIVE WHEEL

Title (de)
VORRICHTUNG ZUR RELATIVEN DREHWINKELVERSTELLUNG EINER NOCKENWELLE EINER BRENNKRAFTMASCHINE ZU EINEM ANTRIEBSRAD

Title (fr)
DISPOSITIF DE REGLAGE DE L'ANGLE DE ROTATION D'UN ARBRE A CAMES DE MOTEUR A COMBUSTION INTERNE PAR RAPPORT A UN PIGNON D'ENTREE

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Application
EP 01997625 A 20011106

Priority
• DE 10058707 A 20001125
• EP 0112802 W 20011106

Abstract (en)
[origin: WO242614A1] The invention relates to a device for adjusting the angle of rotation of a camshaft of an internal combustion engine relative to a drive wheel. Said device comprises an inner part (4) that is linked with the camshaft in a rotationally fixed manner and that has at least substantially radially extending webs or blades (6a to 6e). A driven cellular wheel (10) is provided with a plurality of cells distributed across its periphery and delimited by webs (12a to 12e). Said cells are subdivided into two respective pressure compartments (22a to 22e and 24a to 24e) by the webs or blades (6a to 6e) of the inner part (4) that are guided inside said cells in an angularly mobile manner. When the pressure compartments are hydraulically pressurized or depressurized via control lines, the camshaft can be rotated between two end positions relative to the cellular wheel (10) by way of the webs or blades. Sealing elements (40) are disposed on the free front face (36) of the webs or blades and seal the pressure compartments defined by said webs or blades. The device is further characterized in that the front face (36) of the webs or blades (6a to 6e) is provided with recesses (38) in which sealing bodies (40) are disposed that are forced against an internal wall (42) of the cellular wheel (10) by a hydraulically applied force. The sealing bodies are configured as rollers (40) that are received in recesses (38) with a certain assembly clearance. Said rollers (40), during operation of the adjustment unit (5), establish a linear contact (LK1, LK1') with the internal wall (42) of the cellular wheel (10) and a linear contact (LK2, LK2') with the side walls (44, 44') of the recesses (40), thereby sealing the pressure compartments.

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F01L 1/344

IPC 8 full level
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CPC (source: EP US)
F01L 1/3442 (2013.01 - EP US); **F01L 2001/34479** (2013.01 - EP US)

Citation (search report)
See references of WO 0242614A1

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DE102014208598B4; DE102014208598A1; WO2015169292A2; US9970335B2

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