

Title (en)

Mechanical device for varying the phase between a drive shaft and a camshaft of an internal combustion engine

Title (de)

Mechanische Vorrichtung zur Winkelverstellung einer Nockenwelle gegenüber einem Antriebsrad in einer Brennkraftmaschine

Title (fr)

Dispositif mécanique pour varier la phase entre un arbre à cames et son entraînement dans un moteur à combustion interne

Publication

**EP 0902169 B1 20020626 (EN)**

Application

**EP 98203013 A 19980909**

Priority

IT PD970198 A 19970911

Abstract (en)

[origin: EP0902169A1] In a mechanical device for varying the phase between a drive shaft and a camshaft (3) of an internal combustion engine, in which the phase variation is achieved by varying the angular position of a body (5), connected kinematically to the drive shaft, relative to that of a shaft (2), connected kinematically to the camshaft (3), by the movement of a piston (4) interposed between the body and the shaft to each of which it is connected by toothed portions (15 17), there are provided stop means (30) for stopping the relative rotation of the body and the shaft, causing the piston (4) to be stopped by engagement in the toothed portions (16, 18) of the shaft (2) and of the body (5) in the stop positions. At least one of those toothed portions has at least one gap (36, 38, 40) in the axial profile of the respective sides of the toothed portions (16, 18), which gap is in a position such that it straddles the edge (19, 20) of the piston (4) in the corresponding stop position. The gap extends for a distance adjacent to the toothed portion (15, 17) of the piston (4) and for a further distance beyond that toothed portion in the direction of further travel beyond the stop position. <IMAGE>

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