

Title (en)  
HYDRAULIC CONTROL DEVICE

Publication  
**EP 0241870 B1 19920102 (DE)**

Application  
**EP 87105284 A 19870409**

Priority  
DE 3612684 A 19860415

Abstract (en)  
[origin: US4744542A] The invention relates to a hydraulic control apparatus comprising a hydraulically adjustable throttle opening between an inlet passage and an outlet passage, a three-way pilot valve connected to an external actuator and having its inlet connected to a control pressure inlet passage, its control outlet being connected to the throttle valve in such a manner that the throttle valve element thereof is adapted to be biased in opposition to the pressure in the outlet passage and to the force of a spring. Known control apparatus require the employ of a displacement sensor for sensing the position or displacement of the throttle valve element and for correspondingly acting on the actuator to thereby vary the actuating force thereof for maintaining the opening degree of the throttle opening. This construction involves considerable complications. It is also disadvantageous that the pilot valve is subjected to the full operating pressure, requiring it to be of a highly accurate and therefor expensive construction. According to the invention the second outlet of the three-way pilot valve is connected to the outlet passage, and the valve element of the pilot valve is subjected to the pressure at the control outlet in opposition to the actuating force and to the pressure at the second outlet, and the inlet pressure supplied to the pilot valve is higher than the outlet pressure at least by the maximum possible pressure difference over the pilot valve.

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