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(54) **Electro-hydraulic actuator and method for controlling actuator position**

(57) A fluid actuator (10) achieves precise placement without external feedback by employing a spool (44) slidable within a piston (20). The relative positions of the piston (20) and the spool (44) determine whether pressurized fluid is applied to extend the piston, to retract the piston, or to maintain the position of the piston. The spool (44) is positioned by balancing a spring (46) force on one end with a variable pressure force on the other end, the variable pressure fluid for providing the

variable pressure force being supplied by a pulse width modulation valve (28) which is mounted in the actuator (10). The pressure of the fluid supplied by the modulation valve (28) is a function of an input such as an electrical signal received by the valve. The position of the piston (20) is determined by the position of the spool (44). In an exemplary embodiment, an actuator positions the vanes of a turbocharger of a motor vehicle engine. The pressurized fluid used is the crankcase oil of the engine.

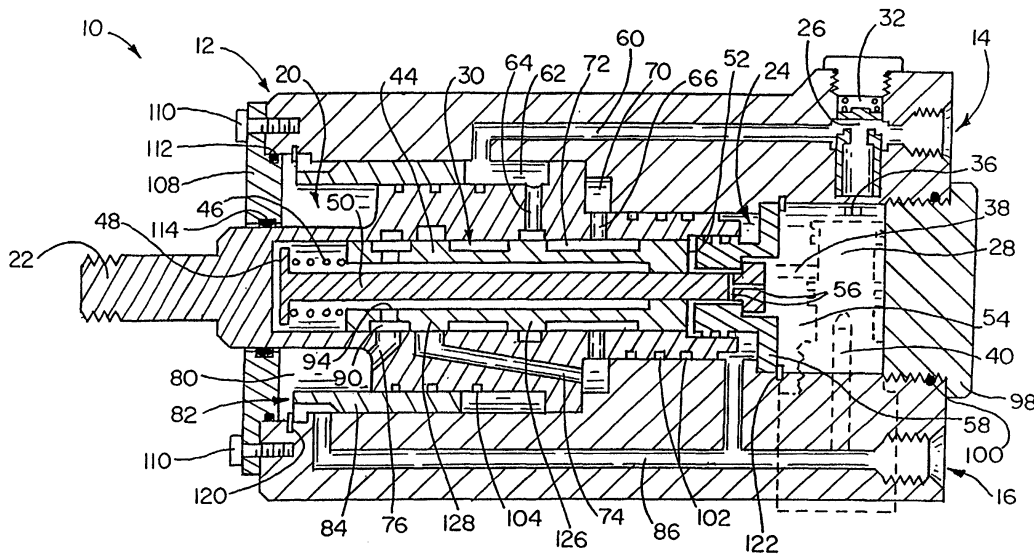


FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 00 30 5750

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
MUNICH		25 September 2003	Toffolo, O
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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