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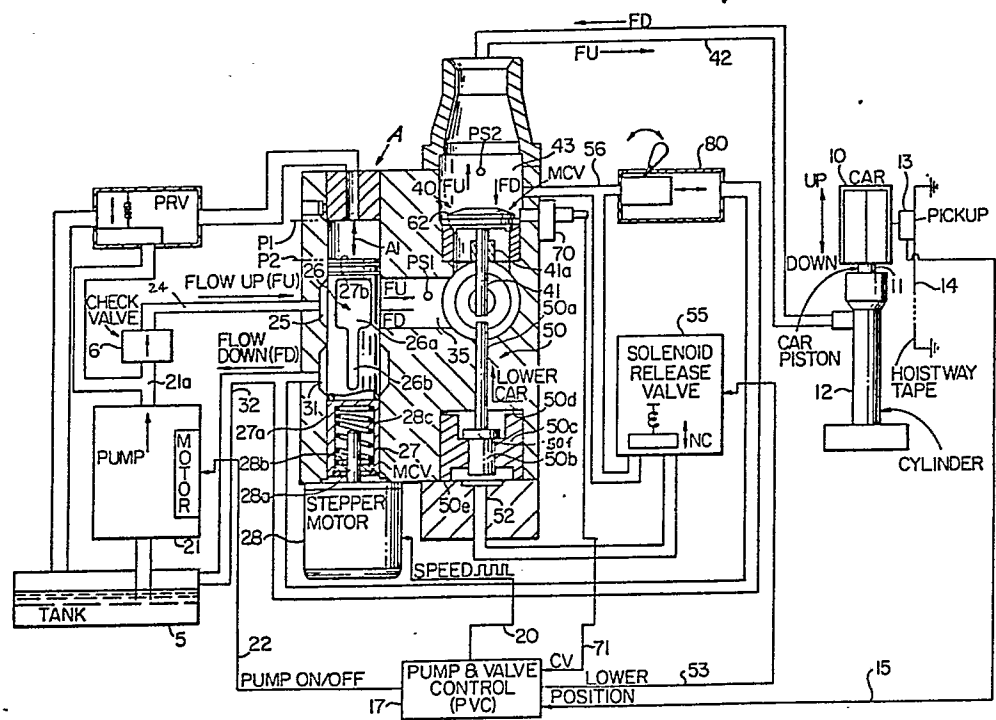
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(54) **Pressure-referenced programmed flow control in a hydraulic valve.**

(57) The point at which pump out pressure exceeds load is sensed to provide a point for scheduling flow to an actuator in a hydraulic system, such as an elevator. Flow is controlled by a stepper motor (28) that moves a flow control valve (27). When the pump (21) is turned on, the valve (27) is positioned to bypass flow; the bypass flow is then programmably decreased to increase the flow to the actuator. Reverse flow is regulated by the valve (27) to control actuator retraction. Reverse flow is initiated by opening a check valve (40) with an actuator (50) that opens it first to reduce pressure across the valve, then fully. The flow control valve (27) also operates to relieve excess pressure in the system.

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	US-A-3977497 (DAVID C MCMURRAY) * column 7, line 52 - line 61 * * column 8, line 6 - line 14 * * column 9, line 17 - line 33 * * column 10, line 61 - line 66; figures 1, 2 *	1,3,6,8	B66B1/04 F15B21/08
A	---	2,4,5,7	
P,X	WO-A-8606359 (RITA) * page 16, line 1 - line 9; figures 1, 3 *	1,3,6,8	
D,A	US-A-4418794 (G MANCO) * column 1, line 48 - line 55 * * column 2, line 56 - line 65 * * column 4, line 50 - column 5, line 8; figures 1, 2 *	1-8	
A	US-A-3892292 (M TAKENOSHITA ET AL) * column 4, line 65 - column 5, line 21; figure 1 *	1-4,8	
A	CH-A-578478 (SCHWEIZERISCHE INDUSTRIE-GESELLSCHAFT) * column 1, line 61 - line 64; figure 1 *	1,3,6,8	TECHNICAL FIELDS SEARCHED (Int. Cl.4) B66B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 JANUARY 1989	Examiner CLEARY F.M.
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			