

Title (en)

HYDRAULIC CIRCUIT WITH TWO VARIABLE FLOW PUMPS CONTROLLED BY EXCESS FLOW

Publication

**EP 0105473 B1 19881005 (DE)**

Application

**EP 83109740 A 19810611**

Priority

US 16108280 A 19800619

Abstract (en)

[origin: US4335577A] The displacement controllers of a first variable displacement pump supplying fluid for hoe and travel functions of an excavator and a second pump supplying fluid for the excavator house swing function are connected to shuttle valves which operate to couple to the controllers the lesser of the power beyond fluid pressures emanating from travel function and swing function control valves. A bypass circuit is arranged to couple power beyond flow from the swing function control valve to join the flow being outputted from the first pump when the pressure of the last-named power beyond flow exceeds the lesser of that emanating from the travel control functions. Lead compensators are provided to make the controllers more responsive to circuit demands and a power limiting valve is provided for automatically connecting pressure for destroying the pumps to relieve engine load when the engine speed falls to a predetermined minimum.

IPC 1-7

**F15B 11/16**; E02F 9/22

IPC 8 full level

**A01B 63/00** (2006.01); **A01B 63/10** (2006.01); **E02F 9/22** (2006.01); **F15B 11/00** (2006.01); **F15B 11/17** (2006.01)

CPC (source: EP US)

**E02F 9/2232** (2013.01 - EP US); **E02F 9/2239** (2013.01 - EP US); **E02F 9/2246** (2013.01 - EP US); **E02F 9/2292** (2013.01 - EP US); **E02F 9/2296** (2013.01 - EP US); **F15B 11/17** (2013.01 - EP US); **F15B 2211/20553** (2013.01 - EP US); **F15B 2211/20576** (2013.01 - EP US); **F15B 2211/25** (2013.01 - EP US); **F15B 2211/30505** (2013.01 - EP US); **F15B 2211/3116** (2013.01 - EP US); **F15B 2211/6054** (2013.01 - EP US); **F15B 2211/65** (2013.01 - EP US); **F15B 2211/7142** (2013.01 - EP US); **F15B 2211/78** (2013.01 - EP US)

Citation (examination)

- US 4024710 A 19770524 - ZELLE LESTER L
- US 3718159 A 19730227 - TENNIS F
- US 3465519 A 19690909 - MCALVAY JOHN C, et al
- US 3455210 A 19690715 - ALLEN JOHN D
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Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

**EP 0105473 A2 19840418**; **EP 0105473 A3 19870128**; **EP 0105473 B1 19881005**; AR 227546 A1 19821115; AU 544947 B2 19850627; AU 7026181 A 19811224; BR 8103841 A 19820309; CA 1148446 A 19830621; DE 3167292 D1 19850103; EP 0042547 A2 19811230; EP 0042547 A3 19820804; EP 0042547 B1 19841121; ES 503127 A0 19821101; ES 8300959 A1 19821101; JP H0213164 B2 19900403; JP S5729801 A 19820217; MX 153742 A 19861230; US 4335577 A 19820622; ZA 814125 B 19830126

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**EP 83109740 A 19810611**; AR 28578881 A 19810619; AU 7026181 A 19810508; BR 8103841 A 19810617; CA 378456 A 19810527; DE 3167292 T 19810611; EP 81104489 A 19810611; ES 503127 A 19810617; JP 9517981 A 19810619; MX 18729081 A 19810513; US 16108280 A 19800619; ZA 814125 A 19810618