

Title (en)
Hydraulic assembly

Title (de)
Hydraulikaggregat

Title (fr)
Agrégat hydrophile

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Application
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Abstract (en)
[origin: US2008302097A1] The invention relates to a hydraulic group comprising a reservoir (28) for oil, in which a multiple piston pump (60) is arranged. The individual pumps (61) are cyclically driven by an eccentric ring (29). In order to ensure a permanent immersion of the individual pumps in the reservoir (28), an auxiliary reservoir (47) providing oil for refilling the reservoir (28) is arranged above the reservoir. The auxiliary reservoir (47) is connected to an additional tank (45) by means of a connection line (48).

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CPC (source: EP US)
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Citation (opposition)
Opponent :
• DE 3928950 A1 19910314 - WAGNER GMBH J [DE]
• DE 19859340 A1 20000706 - MANNESMANN VDO AG [DE]
• DE 29609701 U1 19960822 - HEILMEIER & WEINLEIN [DE]
• US 4627793 A 19861209 - KUROYANAGI MASATOSHI [JP], et al
• DE 29809935 U1 19981008 - HEILMEIER & WEINLEIN [DE]
• DE 29906881 U1 19990701 - HEILMEIER & WEINLEIN [DE]
• DE 4231785 A1 19940324 - TEVES GMBH ALFRED [DE]
• DE 3541347 A1
• DE 202004006109 U1 20040617 - WAGNER PAUL HEINZ [DE]
• EP 0611887 A1 19940824 - DAIKIN IND LTD [JP]

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