

Title (en)

HYDROSTATICALLY AUGMENTED MECHANICAL DRIVE UNIT.

Title (de)

HYDROSTATISCH VERBESSERTE MECHANISCHE ANTRIEBSEINHEIT.

Title (fr)

UNITE D'ENTRAINEMENT MECANIQUE AUGMENTE DE MANIERE HYDROSTATIQUE.

Publication

EP 0088794 A4 19840301 (EN)

Application

EP 82902952 A 19820907

Priority

US 30348381 A 19810918

Abstract (en)

[origin: WO8301096A1] The disclosed drive unit (10) includes an input shaft (90) and an output shaft (20). An inner axial face cam (92) is attached to the input shaft (90), and a cylinder block (40) which defines an outer ring of cylinders and an inner ring of cylinders, nested within the outer ring, is attached to the output shaft (20). An outer axial face cam (143) is mounted to a housing (130), such that its tilt angle can be adjusted, and pistons are disposed within the cylinders to slide around the inner and outer cams. The inner cam and pistons act as a pump which pressurizes a fluid that is then conducted to the outer pistons and cam, which act as a motor. A valve head (100) is mounted to a tension member (94) which extends through a central bore (102) in the cylinder block (40) and is secured to the input shaft (90) to hold the cylinder block (40) in place against the inner cam (92). A motor activation valve (176) for reducing hydraulic pressure on the motor while hydraulically locking the pump, and a soft-start valve (190) for providing a neutral mode, are also disclosed.

IPC 1-7

F15B 15/00

IPC 8 full level

F16H 39/14 (2006.01)

CPC (source: EP)

F16H 39/14 (2013.01)

Citation (search report)

- [X] US 3504492 A 19700407 - NEUKIRCH JOHANNES
- [A] US 2228799 A 19410114 - WATKINS CARL V

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