

Title (en)  
Hydraulic actuator with retainer

Title (de)  
Hydraulischer Stellglied mit Halter

Title (fr)  
Verin hydraulique avec dispositif de retenue

Publication  
**EP 1306562 A1 20030502 (EN)**

Application  
**EP 02022504 A 20021007**

Priority  
GB 0125692 A 20011026

Abstract (en)

An hydraulic actuator (10) having a housing (11) with a piston (13) slideable in the housing and a push rod (15) extending from one end of the housing a bellows (40) encircles the push rod and is secured at one perimeter (41) to the housing and at a second perimeter (43) engages a formation on the push rod (15) to retain the push rod in a predetermined extension position relative to the housing (11) during delivery of the actuator from the manufacturer to the end user. Actuation of the actuator after connection to an associated hydraulic circuit is arranged to disengage the second periphery (43) of the bellows from the formation (44) on the push rod (15) to allow free movement of the push rod relative to the housing thereafter <IMAGE>

IPC 1-7  
**F15B 15/26**

IPC 8 full level  
**F15B 15/26** (2006.01)

CPC (source: EP)  
**F15B 15/261** (2013.01)

Citation (search report)

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- [A] US 4557361 A 19851210 - NIX RICHARD A [US], et al
- [A] EP 0027211 A1 19810422 - KNORR BREMSE GMBH [DE]

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