

Title (en)  
DUAL LOCKING HYDRAULIC ACTUATOR FOR STRUCTURAL BRACE

Title (de)  
DUALES HYDRAULISCHES VERRIEGELUNGSSTELLGLIED FÜR EINE STRUKTURSTÜTZE

Title (fr)  
ACTIONNEUR HYDRAULIQUE À DOUBLE VERROUILLAGE POUR RENFORT STRUCTUREL

Publication  
**EP 3109487 A1 20161228 (EN)**

Application  
**EP 16175193 A 20160620**

Priority  
• CA 2895679 A 20150626  
• US 201514831947 A 20150821

Abstract (en)  
A lockable actuator has lock segments that move into recesses inside a piston to enable the piston to move. The lock segments may also move radially outwardly from the recesses in the piston to engage a bevel edge of a cylinder housing assembly to lock the piston. Lock rams having ramps force the lock segments radially outwardly into engagement with the bevel edge of the cylinder housing assembly.

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

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

Citation (applicant)  
• US 6832540 B2 20041221 - HART KENNETH E [US]  
• US 6059228 A 20000509 - KOIZUMI TAKASHI [JP], et al  
• US 5063828 A 19911112 - KAMIMURA TOSHIO [JP]  
• US 2014374538 A1 20141225 - SCHMIDT ROBERT KYLE [GB]  
• US 2009091476 A1 20090409 - ATAMAN GARY STEPHEN [CA], et al

Citation (search report)  
• [XA] EP 0170873 A1 19860212 - KNORR BREMSE AG [DE]  
• [X] US 4703683 A 19871103 - SUE BING S [US]  
• [XI] US 4635536 A 19870113 - LIU MING [US], et al

Cited by  
CN114509248A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
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