

Title (en)

Removal tool for servo horn with spline-shaft coupling

Title (de)

Werkzeug zum Entfernen eines Servohorns mit Keilwellenkupplung

Title (fr)

Outil de retrait pour klaxon de servocommande doté de couplage d'arbre à cannelures

Publication

**EP 2837469 A1 20150218 (EN)**

Application

**EP 13180740 A 20130816**

Priority

EP 13180740 A 20130816

Abstract (en)

A removal tool to remove a metal servo horn (21) in an efficient way by utilizing the lifting force to separate the servo horn (21) from a servo output shaft (22) when screw (23) is rotated counter-clockwise and hits against the concave of lower surface of an active-lifting portion (31). Clamping force provided by two fastening members (50) combines the removal tool and servo horn (21) into one integrated unit to avoid the distortion of open end (301) of the removal tool when lifting force ( $\vec{A}$ ) is greater than rigidity of the removal tool. When a lifting force ( $\vec{A}$ ) for removing the integrated unit is applied in direction opposite to installing direction of servo horn (21), it overcomes the friction between the inner splines (213) of servo horn (21) and the outer splines (222) of servo output shaft (22) then separates both splines (213, 222). The removal of the servo horn (21) from the servo output shaft (22) is achieved.

IPC 8 full level

**B25B 27/02** (2006.01); **B25B 27/14** (2006.01)

CPC (source: EP)

**B25B 27/023** (2013.01); **B25B 27/14** (2013.01)

Citation (search report)

- [A] US 5369863 A 19941206 - HASENBERG MARK J [US], et al
- [A] US 2007067985 A1 20070329 - HSIAO CHIH Y [TW]
- [A] US 5177851 A 19930112 - SKOWORODKO MIKE [CA]

Cited by

CN107627259A; CN114321195A

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)

BA ME

DOCDB simple family (publication)

**EP 2837469 A1 20150218**; **EP 2837469 B1 20180516**; DK 2837469 T3 20180827; ES 2675731 T3 20180712; HR P20181244 T1 20181005; HU E039564 T2 20190128; PL 2837469 T3 20181031; PT 2837469 T 20180712; RS 57560 B1 20181031; SI 2837469 T1 20181030; TR 201807458 T4 20180621

DOCDB simple family (application)

**EP 13180740 A 20130816**; DK 13180740 T 20130816; ES 13180740 T 20130816; HR P20181244 T 20180803; HU E13180740 A 20130816; PL 13180740 T 20130816; PT 13180740 T 20130816; RS P20180937 A 20130816; SI 201331135 T 20130816; TR 201807458 T 20130816