

Title (en)

TURBO COMPRESSOR AND TURBO REFRIGERATING MACHINE

Title (de)

TURBOVERDICHTER UND TURBOKÜHLMASCHINE

Title (fr)

TURBOCOMPRESSEUR, ET TURBOMACHINE FRIGORIFIQUE À AIR

Publication

EP 3020980 A4 20170315 (EN)

Application

EP 14822776 A 20140707

Priority

- JP 2013144575 A 20130710
- JP 2014068037 W 20140707

Abstract (en)

[origin: EP3020980A1] A turbo compressor (5) which is provided with a lubricant spray nozzle (39) which is disposed to penetrate a housing (20) and sprays a lubricant toward a bearing (26) accommodated in the housing (20), and an external manifold (38) which is detachably mounted on the housing (20) and supports the lubricant spray nozzle (39) outside of the housing (20) is adopted.

IPC 8 full level

F04D 29/62 (2006.01); **F04D 29/063** (2006.01); **F25B 1/053** (2006.01)

CPC (source: EP US)

F04D 17/10 (2013.01 - EP US); **F04D 25/02** (2013.01 - EP US); **F04D 29/063** (2013.01 - EP US); **F04D 29/60** (2013.01 - US); **F04D 29/624** (2013.01 - EP US); **F25B 1/053** (2013.01 - EP US); **F25B 1/10** (2013.01 - EP US); **F25B 31/004** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US)

Citation (search report)

- [Y] US 5443054 A 19950822 - TATENO MASAO [JP], et al
- [Y] US 2007233415 A1 20071004 - BABU MICHAEL [US], et al
- See references of WO 2015005274A1

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

DOCDB simple family (publication)

EP 3020980 A1 20160518; **EP 3020980 A4 20170315**; **EP 3020980 B1 20200205**; CN 105358840 A 20160224; CN 105358840 B 20181019; JP 2015017538 A 20150129; JP 6102589 B2 20170329; MY 185435 A 20210519; US 2016153462 A1 20160602; WO 2015005274 A1 20150115

DOCDB simple family (application)

EP 14822776 A 20140707; CN 201480038526 A 20140707; JP 2013144575 A 20130710; JP 2014068037 W 20140707; MY PI2015704684 A 20140707; US 201414900375 A 20140707