

Title (en)

A METHOD OF REDUCING SLUDGE AND VARNISH PRECURSORS IN LUBRICATING OILS

Title (de)

VERFAHREN ZUR VERMINDERUNG DES GEHALTES AN VORLAUERVERBINDUNGEN VON SCHLAMM UNDLACK IN SCHMIEROLEN

Title (fr)

PROCEDE DE REDUCTION DES PRECURSEURS DE BOUE ET DE GOMME DANS DES HUILES LUBRIFIANTES

Publication

EP 0703959 B1 20021016 (EN)

Application

EP 94914211 A 19940419

Priority

- US 9404262 W 19940419
- US 4921093 A 19930419

Abstract (en)

[origin: WO9424237A1] A method, composition and filter for reducing the presence of sludge or varnish precursors in a lubricating oil circulating within an internal combustion engine. The lubricating oil containing sludge or varnish precursors is contacted with discrete particles of an oil insoluble, oil wettable compound having an antioxidant functional group and/or a dispersant functional group, which are capable of complexing with sludge or varnish precursors. Preferably the compounds comprise a crosslinked amine having ethylene amine functionality.

IPC 1-7

C10M 171/06; C10M 175/00

IPC 8 full level

C10M 149/22 (2006.01); **C10M 171/06** (2006.01); **C10M 175/00** (2006.01)

CPC (source: EP)

C10M 149/22 (2013.01); **C10M 171/06** (2013.01); **C10M 175/0091** (2013.01); **C10M 2215/04** (2013.01); **C10M 2215/26** (2013.01);
C10M 2217/046 (2013.01); **C10M 2217/06** (2013.01); **C10N 2040/25** (2013.01); **C10N 2040/251** (2020.05); **C10N 2040/255** (2020.05);
C10N 2040/28 (2013.01)

Cited by

EP2194246A2; DE102008044306A1; US7250126B2; US7913858B2

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

WO 9424237 A1 19941027; CA 2160778 A1 19941027; CA 2160778 C 20070417; DE 69431560 D1 20021121; DE 69431560 T2 20030814;
EP 0703959 A1 19960403; EP 0703959 B1 20021016; JP H08508773 A 19960917

DOCDB simple family (application)

US 9404262 W 19940419; CA 2160778 A 19940419; DE 69431560 T 19940419; EP 94914211 A 19940419; JP 52252694 A 19940419