



# SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 15 86 14 57

## Classification of the application (IPC):

C10M 169/04, C10N 10/04, C10N 20/00, C10N 20/02, C10N 20/04, C10N 30/00, C10M, C10N  
C10N 40/25

## Technical fields searched (IPC):

C10M 169/04, C10N 10/04, C10N 20/00, C10N 20/02, C10N 20/04, C10N 30/00, C10M, C10N  
C10N 40/25

| DOCUMENTS CONSIDERED TO BE RELEVANT |   |                   |
|-------------------------------------|---|-------------------|
| Category                            | Citation of document with indication, where appropriate, of relevant passages   | Relevant to claim |
| X                                   | WO 2014172125 A1 (LUBRIZOL CORP [US])<br>23 October 2014 (2014-10-23)   | 1-6               |
| Y                                   | * paragraph [0020] - paragraph [0027] *   | 9, 10             |
| A                                   | * paragraph [0040] - paragraph [0112] *<br>* paragraph [0116] - paragraph [0121] *<br>* paragraph [0140] - paragraph [0146] *<br>* claims; examples * | 7, 8              |
| X                                   | US 2012258897 A1 (TAKESHIMA SHIGEKI [JP] ET AL)<br>11 October 2012 (2012-10-11)   | 1-6               |
| Y                                   | * paragraph [0028] - paragraph [0041] *   | 9, 10             |
| A                                   | * paragraph [0050] - paragraph [0068] *<br>* paragraph [0077] - paragraph [0083] *<br>* claims; examples *  | 7, 8              |
| X                                   | WO 9964543 A1 (EXXONMOBIL OIL CORP)   | 1-6               |
| Y                                   | 16 December 1999 (1999-12-16)   | 9, 10             |
| A                                   | * page 4, line 17 - page 5, line 21 *<br>* claims; examples *   | 7, 8              |
| Y                                   | JP 2011157960 A (MAN DIESEL & TURBO DEUTSCHLAND)  | 9, 10             |
| A                                   | 18 August 2011 (2011-08-18)<br>* abstract *   | 1-8               |

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

|                 |                                  |                   |
|-----------------|----------------------------------|-------------------|
| Place of search | Date of completion of the search | Examiner          |
| Munich          | 21 June 2018                     | Elflein, Eleonore |

## CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone  
Y: particularly relevant if combined with another document of the same category  
A: technological background  
O: non-written disclosure  
& : member of the same patent family, corresponding document

P: intermediate document  
T: theory or principle underlying the invention  
E: earlier patent document, but published on, or after the filing date  
D: document cited in the application  
L: document cited for other reasons



## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 15 86 14 57

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 21-06-2018  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent document cited in search report |    | Publication date |  | Patent family member(s)   | Publication date   |
|--|----|------------------|--|---|--|
| WO 2014172125                          | A1 | 23-10-2014       | CA<br>EP<br>US<br>WO                         | 2909704 A1<br>2986694 A1<br>2016060562 A1<br>2014172125 A1  | 23-10-2014<br>24-02-2016<br>03-03-2016<br>23-10-2014   |
| US 2012258897                          | A1 | 11-10-2012       | CN<br>EP<br>JP<br>JP<br>KR<br>SG<br>US<br>WO | 102666819 A<br>2518134 A1<br>5483329 B2<br>2011132338 A<br>20120109578 A<br>181735 A1<br>2012258897 A1<br>2011077810 A1 | 12-09-2012<br>31-10-2012<br>07-05-2014<br>07-07-2011<br>08-10-2012<br>30-07-2012<br>11-10-2012<br>30-06-2011 |
| WO 9964543                             | A1 | 16-12-1999       | AR<br>AU<br>CO<br>EP<br>HK<br>PA<br>US<br>WO | 018640 A1<br>740540 B2<br>5070705 A1<br>1100856 A1<br>1035552 A1<br>8475501 A1<br>6339051 B1<br>9964543 A1              | 28-11-2001<br>08-11-2001<br>28-08-2001<br>23-05-2001<br>27-01-2017<br>24-05-2000<br>15-01-2002<br>16-12-1999 |
| JP 2011157960                          | A  | 18-08-2011       | JP<br>JP<br>JP<br>KR                         | 5584720 B2<br>2011157960 A<br>2012137092 A<br>20110089074 A   | 03-09-2014<br>18-08-2011<br>19-07-2012<br>04-08-2011   |