

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AFTON CHEMICAL CORPORATION

Petitioner

v.

INFINEUM INTERNATIONAL LIMITED

Patent Owner

Case IPR2017-01321

Patent 8,076,274

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**PATENT OWNER'S PRELIMINARY RESPONSE**

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## Exhibits

Exhibit No.	Name
2001	Taylor et al., “Engine lubricant trends since 1990,” Proc. IMechE, Part J.: J. Eng’g Tribology, Vol. 219, pp. 331-346 (2004) (“Taylor”)
2002	Pawlak, “Tribochemistry of Lubricating Oils” (2003) (“Pawlak”)
2003	ACEA European Oil Sequences (1996) (“1996 ACEA Spec.”)
2004	Standard Specification for Performance of Engine Oils, ASTM Designation D 4485-05a (“API Specification”)
2005	American Petroleum Institute, Engine Oil Licensing and Certification System, Engine Oil Guide (2009)
2006	McGeehan et al., “API CJ-4: New Oil Category for 2007 Low Emission Diesel Engines Using Particulate Filters,” 15 <sup>th</sup> Int’l Colloq. Tribology—Auto. and Indus. Lubrication, Jan. 17-19, 2006 (“McGeehan”)
2007	U.S. Patent No. 4,908,145 to Fenoglio (“Fenoglio”)
2008	ACEA European Oil Sequences (1999) (“1999 ACEA Spec.”)
2009	ACEA European Oil Sequences (2002) (“2002 ACEA Spec.”)
2010	Wilby et al., “Development of Future Low Emission Engine Oils,” SAE 2003-01-1990 (2003) (“Wilby”)
2011	Stunnenberg et al., “Future Heavy Duty Diesel Lubricants For Low Emission Engines,” SAE 2001-01-3768 (2001) (“Stunnenberg”)
2012	Stachowiak, “Wear: Materials, Mechanisms and Practice” (2005) (“Stachowiak”)
2013	Excerpts from Mortier et al., “Chemistry and Technology of Lubricants” (1997) (“Chemistry and Technology of Lubricants”)

- 2014 Irganox L 57 Material Safety Data Sheet, Ciba Corp. (Jan. 29, 2009 Revision) (“Irganox L 57 MSDS”)
- 2015 Specification of 4,4'-Methylenebis(2,6-di-tert-butylphenol) [online]. Sigma-Aldrich [retrieved on 2017-07-24]. Retrieved from the Internet: <URL:<http://www.sigmaaldrich.com/catalog/product/aldrich/277924?lang=en&region=US>>.
- 2016 U.S. Patent 4,234,435 to Meinhardt et al. (“Meinhardt”)

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