

Title (en)  
NO<sub>x</sub> CONTROL FOR IC ENGINES

Title (de)  
NO<sub>x</sub>-STEUERUNG FÜR VERBRENNUNGSMOTOREN

Title (fr)  
ELIMINATION DE NO<sub>x</sub> PAR INJECTEURS POUR MOTEURS A COMBUSTION INTERNE

Publication  
**EP 1583714 A4 20070411 (EN)**

Application  
**EP 03799961 A 20031217**

Priority  
• US 0340263 W 20031217  
• US 43433502 P 20021217

Abstract (en)  
[origin: WO2004058642A1] A multi-stage NO<sub>x</sub> reduction system employs catalysts effective at different temperature ranges and can have reagent injectors associated with each, for use in series or in parallel. A controller directs reagent introduction to one catalyst or the other as temperature and other conditions dictate. Valving can redirect exhaust to particular catalyst zones, if necessary.

IPC 8 full level  
**B01D 53/94** (2006.01); **F01N 3/20** (2006.01); **F01N 13/02** (2010.01)

CPC (source: EP)  
**B01D 53/9431** (2013.01); **F01N 3/2053** (2013.01); **F01N 3/208** (2013.01); **F01N 13/009** (2014.06); **F01N 13/0093** (2014.06); **F01N 3/32** (2013.01); **F01N 2240/36** (2013.01); **F01N 2560/06** (2013.01); **F01N 2570/14** (2013.01); **F01N 2610/00** (2013.01); **F01N 2610/02** (2013.01); **Y02T 10/12** (2013.01)

Citation (search report)  
• [PX] EP 1321641 A1 20030625 - ISUZU MOTORS LTD [JP]  
• [X] EP 0723805 A2 19960731 - TOYOTA MOTOR CO LTD [JP], et al  
• [E] DE 10237777 A1 20040226 - DAIMLER CHRYSLER AG [DE]  
• [E] EP 1176292 B1 20060913 - TOYOTA MOTOR CO LTD [JP]  
• [DA] HECK R M ET AL: "OPERATING CHARACTERISTICS AND COMERCIAL OPERATING EXPERIENCE WITH HIGH TEMPERATURE SCR NO<sub>x</sub> CATALYST", ENVIRONMENTAL PROGRESS, AMERICAN INSTITUTE OF CHEMICAL ENGINEERS,, US, vol. 13, no. 4, November 1994 (1994-11-01), pages 221 - 225, XP008075405, ISSN: 0278-4491  
• See also references of WO 2004058642A1

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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2004058642 A1 20040715**; AU 2003299644 A1 20040722; AU 2003299676 A1 20040722; EP 1583714 A1 20051012; EP 1583714 A4 20070411; WO 2004058641 A1 20040715

DOCDB simple family (application)  
**US 0340263 W 20031217**; AU 2003299644 A 20031216; AU 2003299676 A 20031217; EP 03799961 A 20031217; US 0340071 W 20031216