

Alliance, AIAM, and EMA Proposed Roadmap for OBD-Threshold (Focus LEV & ULEV II) Diesel

Rev 4-6-2006

System	Possible Implementing Technology	ARB Proposed Threshold 2006-02-07	Proposed Threshold		Comments (open issues)
			LEV II	Target Date for Series Production	
Oxi-KAT - Monitoring (1.75 x STD)	ibid	1.75 x Std (MY2004+) (DPF-SCR-OXI MY2010+)	Functional Check	MY 08-09	Proposal for monitoring: 1- exotherm functionality during DPF-regeneration 2- intrusive exotherm functionality 3- overtemperature approaches 4- Evaluation of OSC based on Q2-Sensor?? 5- define other technical approaches (Note: Prior to 2010, catastrophic failure)
	ibid	1.75 x Std (MY2004+) (DPF-SCR-OXI MY2010+)	7 x NMHC	MY 2010	
	ibid		3.5 x NMHC	MY 2013	
	ibid		1.75 x NMHC	MY 2016	
DPF - Monitoring (1.5 x STD)	ibid	5.0 x Std PM (MY2004-09) Frequent Regeneration (f)(9.2.2): 1.75 x Std NMHC (MY2004+)	Functional Check	MY 08-09	Proposal: 1- Quasi-continuous two-sided monitor which compares delta P / volume flow with modelled soot load. 2- Evaluate for next meeting x % < 10 x Std, y % > 10 x Std, z % = 5 x Std... Provided the Particulate Sensors are available that can meet: 1. Performance 2. Durability 3. Accuracy Requires additional refinement and development of particulate sensors.
	ibid	5.0 x Std PM (MY2004-09) Frequent Regeneration (f)(9.2.2): 1.75 x Std NMHC (MY2004+)	10 x Std	MY 2010	
	Particle Sensor	3.0 x Std (MY2010-12)	3 x Std	MY 2013	
		1.75 x Std (MY2013+)	1.75 x Std	MY2016	
SCR Cat - Monitoring (1.75 x STD)		3.0 x Std (MY2004-09) 1.75 x Std (MY2010+)	Functional Check	MY 08-09	Must demonstrate feasibility, durability, accuracy of the sensor.
	Closed loop via NOx-Sensor (Conversion-efficiency via NOx-slip / permeation)	3.0 x Std (MY2004-09) 1.75 x Std (MY2010+)	5 x Std	MY 2010	
	ibid		3 x Std	MY 2013	
	ibid		1.75 x Std	MY 2016	

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			LEV	Target Date for Series Production	
DeNox-CAT - Monitoring (1.75 x STD)		3.0 x Std (MY2004-09) 1.75 x Std (MY2010)	Functional Check	MY 08-09	
	Deletion of removal => Signal-comparison in front of / behind catalyst	3.0 x Std (MY2004-09) 1.75 x Std (MY2010)	5 x Std	MY 2010	Deletion of removal => Signal-comparison in front of / behind catalyst will depend on the sensor accuracy, durability, and performance.
	tbd		3 x Std	MY 2013	Evaluation of OSC based on O2-sensor
	tbd		1.75 x Std	MY 2016	
Fuel-System - Monitoring (1.5 x STD)		1.5 x Std (MY2004+) - Injection Quantity for MY2010+ - Injection Timing for MY2010+ - Injection Pressure for MY 2010+	5 x Std	MY 2010	Evaluation of adaption value (fuel mass observer, fuel balance control)
	tbd		3 x Std	MY 2013	
	tbd		1.75 x Std	MY 2016	
EGR-System - Monitoring (1.5 x STD)		- Low/High Flow: 1.5 x Std (MY2004+), - Slow Response: 1.5 x Std (MY2010+),	5 x Std	MY 08-09	
	tbd		2.5 x std	MY 2010	
			2 x Std	MY 2013	
			1.5 x Std	MY 2016	
Boost pressure Control (1.5 x STD)		- Underboost: 1.5 x Std (MY2010+) - Overboost: 1.5 x Std (MY2010+) - VGT: 1.5 x Std (MY2010+) - Charge Air Cool: 1.5 x Std (MY2010+)	2.5 x Std	MY 2010	Interim In-Use Standard of 3.0 x Std
	tbd		2 x Std	MY 2013	Interim In-Use Standard of 3.0 x Std
			1.5 x Std	MY 2016	