



## LIST OF USEFUL ACRONYMS USED IN EMISSIONS ACTIVITIES

AAM	Alliance of Automobile Manufacturers (USA)
ACEA	Association des Constructeurs Européen d'Automobiles (European Automobile Manufacturers' Association)
ACEM	Association des Constructeurs Européen de Motorcycles (the Motorcycle Industry in Europe)
AECC	Association for Emissions Control by Catalyst
AECS	Auxiliary Emission Control Strategy
AEGPL	Association Européenne des Gaz de Pétrole Liquéfiés (European LPG Association)
AFEEVAS	South America Vehicles Emission Control Equipments Manufacturers Association
A/F or AFR	Air:Fuel Ratio
AKPF	Arbeitskreis Partikel-Filter-Systemhersteller (Diesel Particulate Filter Manufacturers Task Force, Switzerland)
AIAM	Alliance of International Automobile Manufacturers (USA)
AIT	Alliance Internationale de Tourisme (International Touring Alliance)
APHEA	EU Project: Air Pollution and Health - a European Approach
AQ	Air Quality
ARB	Air Resources Board (California)
ATC	Additives Technical Committee (CEFIC Sector Group)
ATIEL	Association Technique de l'Industrie Européenne des Lubrifiants
BECS	Base Emission Control Strategy
BEE	European Environmental Bureau
BEUC	Bureau Européen des Unions des Consommateurs (European Consumers' Organisation)
BEV	Battery Electric Vehicle
CAFE	Clean Air for Europe and Corporate Average Fuel Economy (USA)
CATP	Committee for Adaptation to Technical Progress
CAPoC	Catalysis and Automotive Pollution Control (International Congress)
CARB	California Air Resources Board
CB-DPF	Catalyst based Diesel Particulate Filter
CCC	Close Coupled Converter
CCMC	Comité des Constructeurs Européen d'Automobile du Marché Commun (now ACEA)
CEC	Co-ordinating European Council (Test Methods for Fuels/Lubricants)
CECRA	Comité Européen du Commerce & de la Réparation Automobiles (European Council for Motor Trades and Repairs)
CEFIC	European Chemical Industry Council
CEN	Comité Européen de Normalisation (European Committee for Standardization)
CER	Community of European Railway and Infrastructure Companies
CVEC	Committee of Vehicle Emissions Control in China
CFV-CVS	Critical Flow Venturi Constant Volume Sampling System
CI	Compression Ignition (Diesel)
CITA	Comité International de l'Inspection Technique Automobile (International Motor Vehicle Inspection Committee)
CLA	Chemiluminescence Analyser (NOx or ozone analyser)
CLD	Chemiluminescence Detector (NOx or ozone detector)
CLEPA	Comité de Liaison de la Construction d'Équipement et de Pièces d'Automobiles (European Association of Automotive Suppliers)
CNG	Compressed Natural Gas
CMAJ	Catalyst Manufacturers Association of Japan
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide



CONCAWE	Conservation of Clean Air & Water in Europe
CRC	Coordinating Research Council (USA Auto/Oil companies)
CR-DPF	Continuously Regenerating Diesel Particulate Filter
CPC	Condensation Particle Counter
CUC	Clean-up Catalyst
CVS	Constant Volume Sampling System
DECSE	Diesel Emission Controls Sulfur Effects project (USA)
DeNOx	Catalyst/trap system that reduces NOx in lean exhaust
DF	Deterioration Factor
DG	Directorate-General
DI	Direct Injection
DIN	Deutsches Institute für Normung (German Institute for Standardization)
DME	Dimethyl Ether
DMU	Diesel Multiple Unit
DNT	Diesel NOx trap
DOC	Diesel Oxidation Catalyst
DPF	Diesel Particulate Filter
DPM	Diesel Particulate Matter
DWE	Diesel Water Emulsion
EBU	European Barge Union
EC	European Community (now EU) or European Commission
ECAS	European Citizen Action Service
ECE	United Nations Economic Commission for Europe (Also ECE City test cycle)
ECMA	Emission Controls Manufacturers Association
ECMT	European Conference of Ministers of Transport
EEA	European Environment Agency (EU)
EEB	European Environmental Bureau
EEFMA	European Emulsion Fuel Manufacturers' Association
EEV	Enhanced Environmentally-friendly Vehicle
EFEG	Environmental Fuels Expert Group (European Commission)
EFOA	European Fuel Oxygenates Association
EFV	Environmentally Friendly Vehicle
EGO	Exhaust Gas Oxygen Sensor
EGR	Exhaust Gas Recirculation
ELV	End of Life Vehicles
ELR	European Load Response test (Heavy-duty)
EMA	Engine Manufacturers Association (USA)
ENGVA	European Natural Gas Vehicle Association
EP	European Parliament
EPA	US Environmental Protection Agency
EPEFE	European Programme on Emissions, Fuels & Engine Technologies
ESC	European Steady State Cycle (Heavy-duty)
ETC	European Transient Cycle (Heavy-duty)
EtOH	Ethyl Alcohol (Ethanol)
EU	European Union
EUCAR	European Council for Automotive R&D (ACEA)
EUDC	Extra Urban Driving Cycle (EU)
EUROMOT	European Association of Internal Combustion Engine Manufacturers
EUROPIA	European Petroleum Industries Association
EV	Electric Vehicle
EZEV	Equivalent Zero Emissions Vehicle (CARB standard)
FAEE	Fatty Acid Ethyl Ester (biodiesel)
FAME	Fatty Acid Methyl Ester (biodiesel)
FBC	Fuel Borne Catalyst
FCV	Fuel Cell Vehicle
FEMA	Federation of European Motorcyclists Associations
FIA	Fédération Internationale de l'Automobile
FIA	Flame Ionisation Analyser (hydrocarbon analyser)

FID	Flame Ionisation Detector (hydrocarbon detector)
FTIR	Fourier-Transform Infra-Red analyser (emissions analyser)
FTP	Federal Test Procedure (USA)
GDI	Gasoline Direct Injection
GEME	Group of Experts on Mechanical Equipment (EU)
GHG	Green House Gas
GRPE	Groupe de travail en matière de Pollution et d'Energie (Working Party on Pollution and Energy) (UN-ECE)
gtr	Global Technical Regulation (UN-ECE)
GVW	Gross Vehicle Weight
GWP	Global Warming Potential
HC	Hydrocarbons
HDC	Highway Driving Cycle
HD(V,E)	Heavy Duty (Vehicle, Engine)
HEGO	Heated Exhaust Gas Oxygen Sensor
HEV	Hybrid Electric Vehicle
HGV	Heavy Goods Vehicle
HUEGO	Heated Universal Exhaust Gas Oxygen Sensor
I&M or I/M	Inspection & Maintenance Program (USA Clean Air Act)
ICE	Internal Combustion Engine
IDI	Indirect Diesel Injection
IFP	Institut Français du Pétrole
IMMA	International Motorcycle Manufacturers Association
IPCC	Intergovernmental Panel on Climate Change
IRGA	Infra-Red Gas Analyser
ISO	International Standards Association
IUPR	In-Use Performance Ratio
IWT	Inland Waterway Transport
JAMA	Japanese Automobile Manufacturers Association
JE05	New Japanese driving cycle (Heavy-duty)
JRC	Joint Research Centre (DG of the European Commission)
KAMA	Korean Automobile Manufacturers Association
LCA	Life Cycle Analysis
LCV	Light Commercial Vehicles
LD(V)	Light-duty (Vehicles)
LeanNOx	Catalyst that reduces NOx in lean exhaust
LEV	Low Emissions Vehicle (CARB)
LNG	Liquefied Natural Gas
LOC	Light Off Catalyst
LPG	Liquefied Petroleum Gas
M100	100% MeOH
M85	85% MeOH:15% Gasoline
MDV	Medium Duty Vehicles
MDLT	Mini-Dilution Tunnel
MECA	Manufacturers of Emission Controls Association (USA)
MeOH	Methyl Alcohol (Methanol)
MI(L)	Malfuction Indicator (Light)
MMT	Methyl Cyclopentadienyl Manganese Tricarbonyl
MON	Motor Octane Number
MTBE	Methyl Tertiary Butyl Ether
MVEG	Motor Vehicles Emissions Expert Group (European Commission)
MY	Model Year
NDIR	Non-Dispersive Infra Red analyser (CO and CO <sub>2</sub> analyser)
NEC	National Emissions Ceilings
NGO	Non-Governmental Organisation
NGV	Natural Gas Vehicle
NLEV	National Low Emission Vehicle standard (USA)
NMHC	Non-Methane Hydrocarbons

NMOG	Non-methane Organic Gases
NOx	Nitrogen Oxides
NPRM	Notice of Proposed Rule-Making (USA)
NRMM	Non-Road Mobile Machinery
NRSC	Non-Road Steady-state Cycle (UN-ECE)
NRTC	Non-Road Transient Cycle (UN-ECE)
O <sub>3</sub>	Ozone
OBD	On-Board Diagnostics
OBM	On-Board Measurement
OCE	Off-Cycle Emissions (UN-ECE)
OE(M)	Original Equipment (Manufacturer)
OECD	Organisation for International Co-operation and Development
OICA	Organisation Internationale des Constructeurs d'Automobiles (International Organization of Motor Vehicle Manufacturers)
OSC	Oxygen Storage Capacity
OTL	On-board Threshold Limit
PN or P#	Particle number
PAH	Polycyclic Aromatic Hydrocarbon
PCFV	Partnership for Clean Fuels and Vehicles (UNEP)
PDP-CVS	Positive Displacement Pump Constant Volume Sampling System
PEMFC	Proton Exchange Membrane Fuel Cell (same as Solid Polymer Fuel Cell)
PEMS	Portable Emissions Measurement System
PI	Positive Ignition
PGE	Platinum Group Elements (Pt, Pd, Rh, Ir, Ru, Os)
PGM	Platinum Group Metals (Pt, Pd, Rh, Ir, Ru, Os)
Pkm	Passenger carried for 1 km
PM	Particulate Matter
PM 0.1	Particulate Matter < 0.1 micron mean diameter
PM 1	Particulate Matter < 1 micron mean diameter
PM 2.5	Particulate Matter < 2.5 micron mean diameter
PM 10	Particulate Matter < 10 micron mean diameter
PMP	Particulate Measurement Program (UN-ECE)
PNGV	Partnership for New Generation of Vehicles (USA)
ppm	parts per million
PTW	Powered Two-Wheeler (motorcycle or moped)
PZEV	Partial Zero Emissions Vehicle (CARB)
RFG	Reformulated Gasoline
RME	Rapeseed Methyl Ester (biodiesel)
RON	Research Octane Number
RVP	Reid Vapour Pressure
SAE	Society of Automotive Engineers (USA)
SCR	Selective Catalytic Reduction
SHED	Sealed Housing for Evaporative Determination
SI	Spark Ignition (Otto) or Système International d'Unités/International Units
SMPS	Scanning Mobility Particle Sizer
SPFC	Solid Polymer Fuel Cell (same as Proton Exchange Membrane Fuel Cell)
SOF	Soluble Organic Fraction
SOFC	Solid Oxide Fuel Cell
SOx	Sulfur Oxides
SULEV	Super Ultra Low Emissions Vehicle
SULG(P)	Super Unleaded Gasoline (Petrol)
SUV	Sports Utility Vehicle
T&E	European Federation for Transport and Environment
TDC	Top Dead Centre
THC	Total Hydrocarbons
tkm	Ton carried for 1 km
TLEV	Transitional Low Emissions Vehicle (CARB standard)
TWC	Three Way Catalyst



UBC	Under Body Converter
UEGO	Universal Exhaust Gas Oxygen Sensor
UIC	Union Internationale des Chemins de fer (International Union of Railways)
UITP	Union Internationale des Transports Publics (International Association of Public Transport)
ULEV	Ultra Low Emissions Vehicle (CARB standard)
ULG(P)	Unleaded Gasoline (Petrol)
ULSD	Ultra Low Sulfur Diesel
ULSG(P)	Ultra Low Sulfur Gasoline (Petrol)
UN-ECE	United Nations – Economic Commission for Europe
UNIFE	Union of the European Railway Industries
VED	Vehicle Excise Duty
VOC	Volatile Organic Compounds
WHDC	World-wide Heavy Duty Certification procedure
WHO	World Health Organisation
WHDC	World-Harmonized Heavy-duty Test Procedure (UN-ECE)
WHSC	World-Harmonized Steady-state Cycle (UN-ECE)
WHTC	World-Harmonized Transient Cycle (UN-ECE)
WLTP	World-Harmonized Light-duty Test Procedure (UN-ECE)
WMTC	World-wide Motorcycle Test Procedure (UN-ECE)
WP29	World Forum for Harmonization of Vehicle Regulations (UN-ECE)
ZDAKW	Gasoline engine test cycle with poisoning phases; cycle developed by Zusammenarbeit Deutscher Automobilhersteller zur Katalysator Weiterentwicklung
ZEV	Zero Emissions Vehicle (CARB standard)
Z-LEV	1/10 <sup>th</sup> ULEV