

LIST OF ABBREVIATIONS

ANR	-	Ammonia to Nitrous Oxides
ASTM	-	American Society of Testing of Materials
aTDC	-	after Top Dead Center
BC	-	Before Christ
BC	-	Bottom Center
BSEC	-	Brake Specific Energy Consumption
BSFC	-	Brake Specific Fuel Consumption
bTDC	-	before Top Dead Center
BTE	-	Brake Thermal Efficiency
BTX	-	Benzene, Toluene or Xylene
CA	-	Crank Angle
CC	-	Continuous Carburetion
CFD	-	Computational Fluid Dynamics
CI	-	Compression Ignition engine
CML	-	Center for Environmental Science
CNG	-	Compressed Natural Gas
CO	-	Carbon Monoxide
CO ₂	-	Carbon Dioxide
CV	-	Calorific Value
DCI	-	Direct Cylinder Injection
DEE	-	Di-ethyl Ether
DI	-	Direct-Injection
DOC	-	Diesel Oxidation Catalyst
DPF	-	Diesel Particulate Filter
EDIP	-	Environmental Design of Industrial Products
EGR	-	Exhaust Gas Circulation
EOC	-	Exhaust valve closes
EPIMAS	-	Electron Pulse Ionization Mass Spectrometer
EROI	-	Energy Return on Investment Index
EVO	-	Exhaust valve opens

GH ₂	-	Gaseous Hydrogen
GHGs	-	Green House Gases
GTL	-	Gas to Liquid
HC	-	Hydro carbon
HCCI	-	Homogeneous Charge Compression Ignition
HHV	-	Higher Heating Value
HPDI	-	High Pressure Direct Injection
HSU	-	Hartridge Smoke Unit
IC	-	Internal combustion
IDI	-	Indirect-Injection
IMEP	-	Indicated Mean Effective Pressure
IVC	-	Inlet Valve Closes
IVC	-	Inlet alve closes
LCA	-	Life Cycle Assessment
LFOR	-	Lean Flame blow out Region
LHV	-	Lower Heating Value
LIRIAM	-	Late Injection, Rapid Ignition and Mixing
LNT	-	Lean NO _x Traps
LOME	-	Linseed oil Methyl Ester
LPDI	-	Low Pressure Direct Injection
LPG	-	Liquefied Petroleum Gas
LPM	-	Liters per Minute
LTC	-	Low Temperature Combustion
MFB	-	Mass Fraction Burned
MPI	-	Manifold Induction/Injection
NDIR	-	Non Dispersive Infrared Rays
NFPA	-	National Fire Protection Association
NO _x	-	Oxides of Nitrogen
PDF	-	Probability Density Function
PHSVO 90	-	Pre-heated Straight Vegetable Oil at 90° C
PM	-	Particulate Matter
Pmax	-	Maximum Cylinder Pressure

PME	-	Palm Methyl Ether
POME	-	Palm oil Methyl Ester
PPM	-	Parts per Million
REGR	-	Reformed Exhaust Gas Circulation
RME	-	Rapeseed Methyl Ester
RSO	-	Rubber Seed Oil
RSOME	-	Rubber Seed Oil Methyl Ester
SAT 12	-	Heat treat furnace System Accuracy Tests
SC	-	Super charged
SCR	-	Selective Catalyst Reduction
SEC	-	Specific Energy Consumption
SME	-	Soybean Methyl Ester
SO ₂	-	Sulphur Dioxide
SOC	-	Start of combustion
SOI	-	Start of Injection
SO _x	-	Oxides of Sulphur
SS 316	-	Stainless Steel 316
SVO	-	Straight Vegetable Oil
TC	-	Turbo charged
TC	-	Top center
TDC	-	Top Dead Center
THC	-	Total Hydrocarbons
TMI	-	Timed Manifold Induction/Injection
TPI	-	Timed Port Injection
ULSD	-	Ultra Low Sulphur Diesel
VOC	-	Voltaic Organic Compound