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SYMBOLS

B	Mass transfer driving force
bsfc	Brake specific fuel consumption (g/kW hr)
C	Constant of the initial drop size equation is $\sqrt[3]{\frac{3}{\pi A_\theta}}$
	where A_θ is constant of nozzle; $A_\theta \cong 0.01$
C_p	Specific heat of air (kJ/kg K)
Cp_{fu}	Specific heat capacity of fuel (kJ/kg K)
Cp_b	Specific heat capacity of vegetable oil(kcal/kg°C)
C_d	Discharge Coefficient of Nozzle = 0.6
d	Diameter of droplet oil(m)
g	Mass transfer conductance(kg/m^2s)
H	Heating value (kJ/kg)
L	Latent heat of evaporation of fuel (kJ/kg)
M	Molecular weight of fuel
m"	Mass transfer flux (kg/m^2s)
m_f'	Fuel consumption (g/hr)
$m_{ox,G}$	Mass ratio of O_2 in the ambient air = 0.232
N	Speed of engine (rpm)
P_b	Brake power of engine (W)
ΔP	Pressure difference in nozzle injection and combustion chamber (Pa)
$\dot{Q}_{single}$	The combustion heat rate from the single fuel droplet (g/s)

r	Ratio of O_2 (Oxidant) to fuel for complete combustion
Re	Reynolds Number
spgr	Specific gravity of blended oil
Sc	Schmidt Number
T	Torque of engine from dynamometer (N-m)
T_{bp}	Boiling point temperature (°C)
T_G	The ambient temperature (°C)
T_{fu}	Temperature of the fuel in the tank (°C)
T_{bp}	Boiling point temperature (°C).
V_a	Velocity of air flow over a sphere (m/s)
V_f	Velocity of fuel injection in combustion chamber (m/s)

Greek Letters

μ	Viscosity at average temperature of surrounding air and droplet (kg/m s)
μ_a	Viscosity of air at average temperature between combustion and air intake (N-s/m^2)
ρ_a	Density of air (kg/m^3)
ρ_f	Density of fuel (kg/m^3)
σ	Surface tension of fuel (N/m)
λ	Dimensionless wavelength

Subscripts and Superscripts

b	Blended of emulsified oil
d	Diesel oil
air	Air
f	Fuel