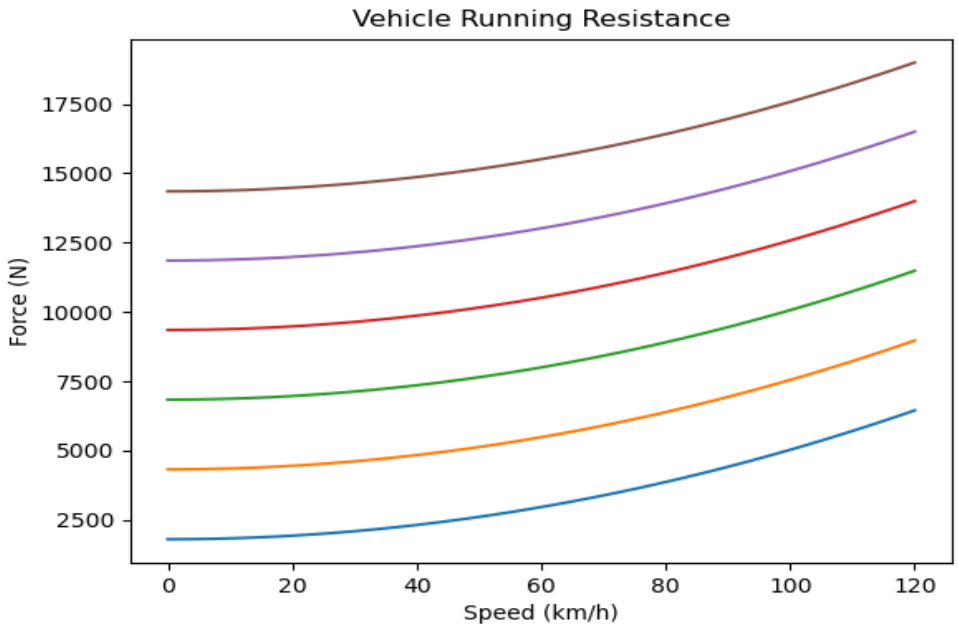
PERFORMANCE REPORT

Design Summary

Motor Power =
Motor Nom Torque =
Motor Peak Torque =
Motor RPM =

Gradeability =
Battery Power =
Battery Energy =
Final Gear Ratio =

Grafik Motor Running Resistance



Parameter Kendaraan

Lebar Kendaraan =
Tinggi Kendaraan =
Ca =
Af =

Kode Ban =
Jari - jari Ban =

Massa Kosong =
Massa Isi =
Massa Total =

Gear Box =
Axle =
Final GR =

Mech Eff =

Dinamika Bergerak

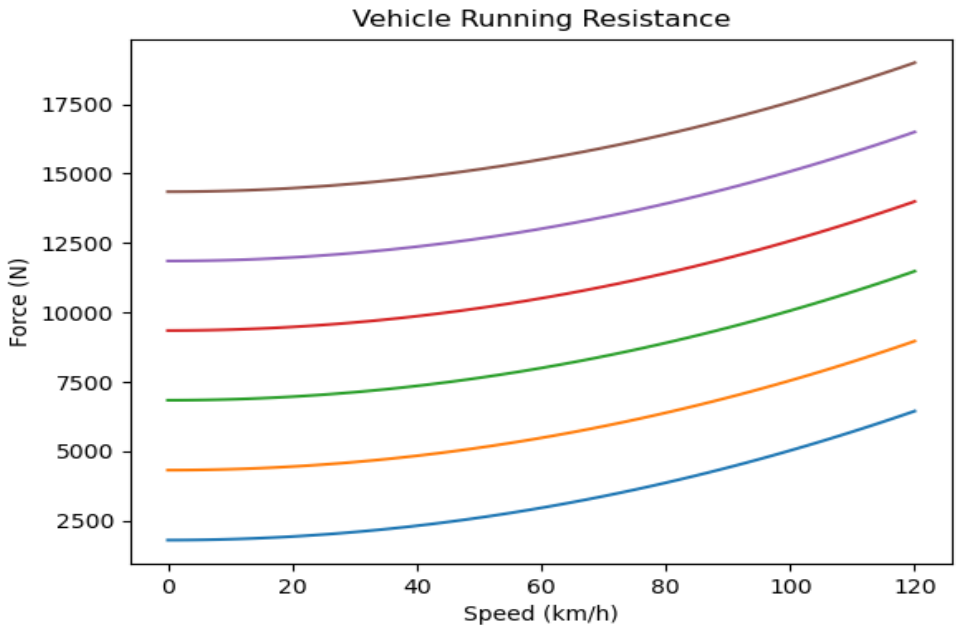
Rolling Resistance =
Drag Resistance =
Massa Jenis Udara =

Kecepatan Angin =
Percepatan Gravitasi =
Acceleration Margin =

Grafik Vehicle Running Resistance

$$RR(N) = R_{RR} + R_D + R_G$$

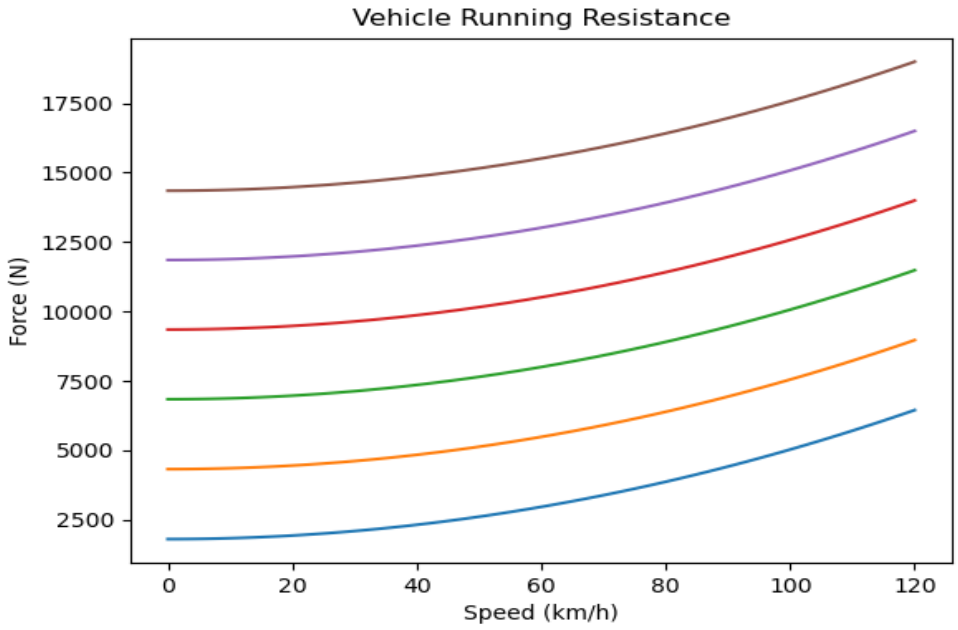
$$RR(N) = C_{RR} \,.m\,.g\,.\cos\theta + \frac{\rho}{2}\,.A_f\,.C_D\,.(V_V + V_W)^2 + m.g.\sin\theta$$



Grafik Wheel Running Resistance

$$RR(Nm) = RR(N) \times r = (R_{RR} + R_D + R_G) \times r$$

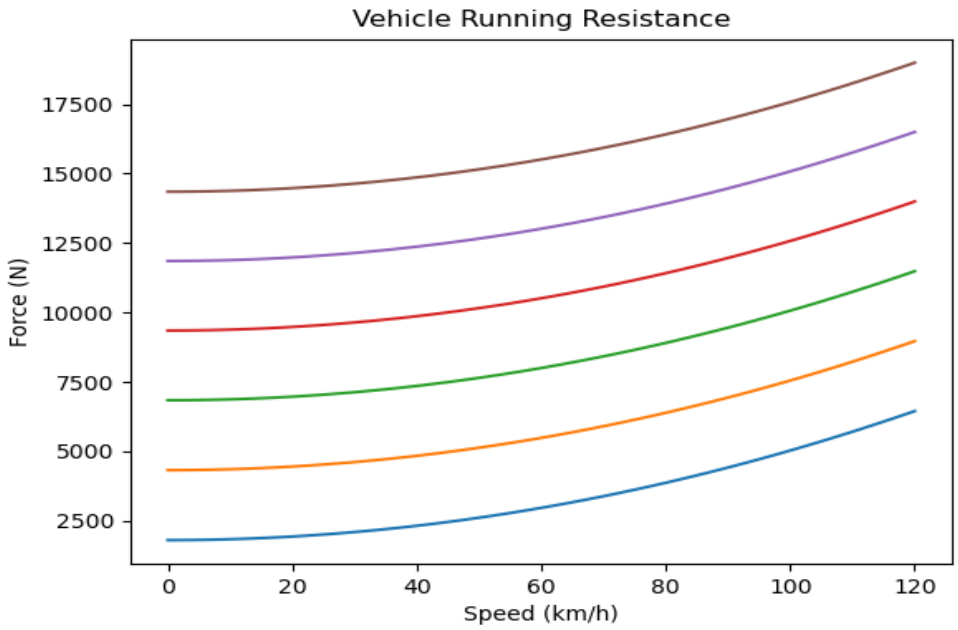
$$RR(Nm) = \left(C_{RR} \,.m\,.g\,.\cos\theta + \frac{\rho}{2}\,.A_f\,.C_D\,.(V_V + V_W)^2 + m.g.\sin\theta\right) \times r$$



Grafik Motor Side Running Resistance

$$RR(Motor) = \frac{RR(Nm)}{GR} = \frac{r}{GR} \times (R_{RR} + R_D + R_G)$$

$$RR(Motor) = \frac{r}{GR} \times \left(C_{RR} . m . g . \cos\theta + \frac{\rho}{2} . A_f . C_D . (V_V + V_W)^2 + m . g . \sin\theta \right)$$



Kebutuhan Power

$$F(\theta, V_V) = C_A . m . a + RR$$

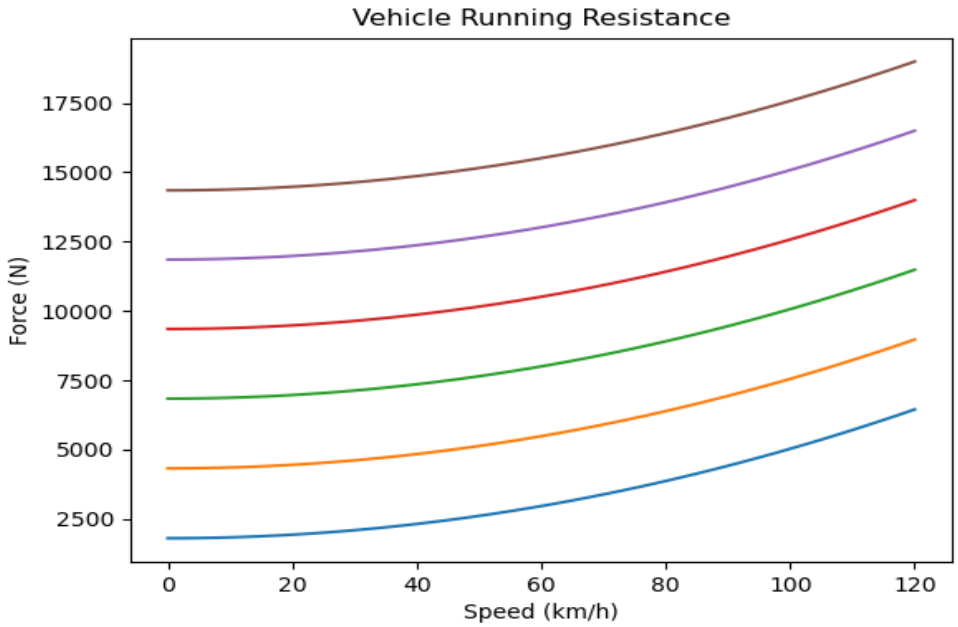
$$F(\theta, V_V) = C_A . m . a + C_{RR} . m . g . \cos\theta + \frac{\rho}{2} . A_f . C_D . (V_V + V_W)^2 + m . g . \sin\theta$$

$$P = F \times V_{WP} \qquad P = \frac{\tau . GR}{r} \times V_{WP}$$

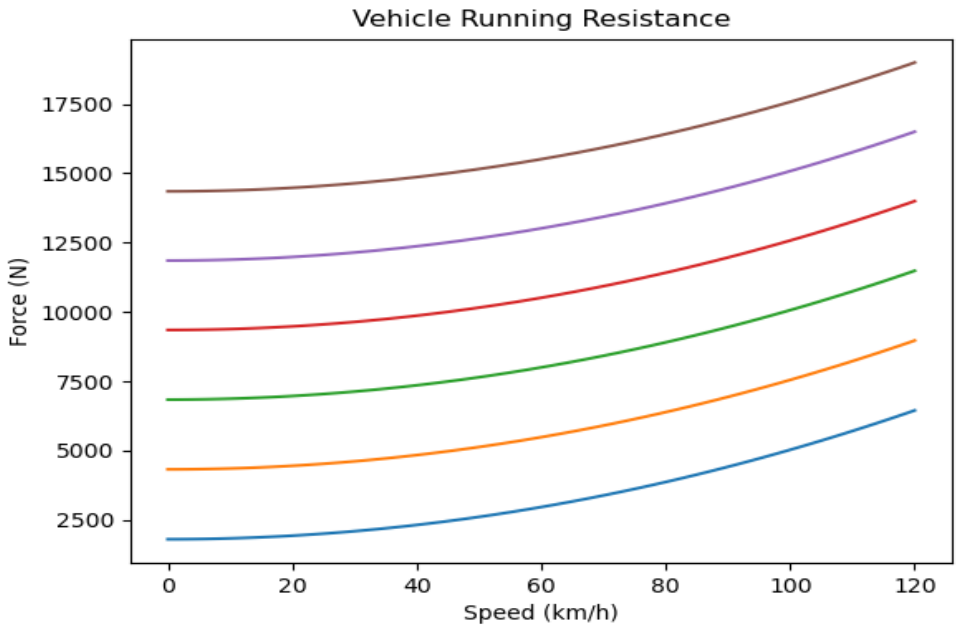
Const T =
High Acc Const T =
Weakening Point =

Avg Acc =
P Motor =
High Acc Weakening Point =

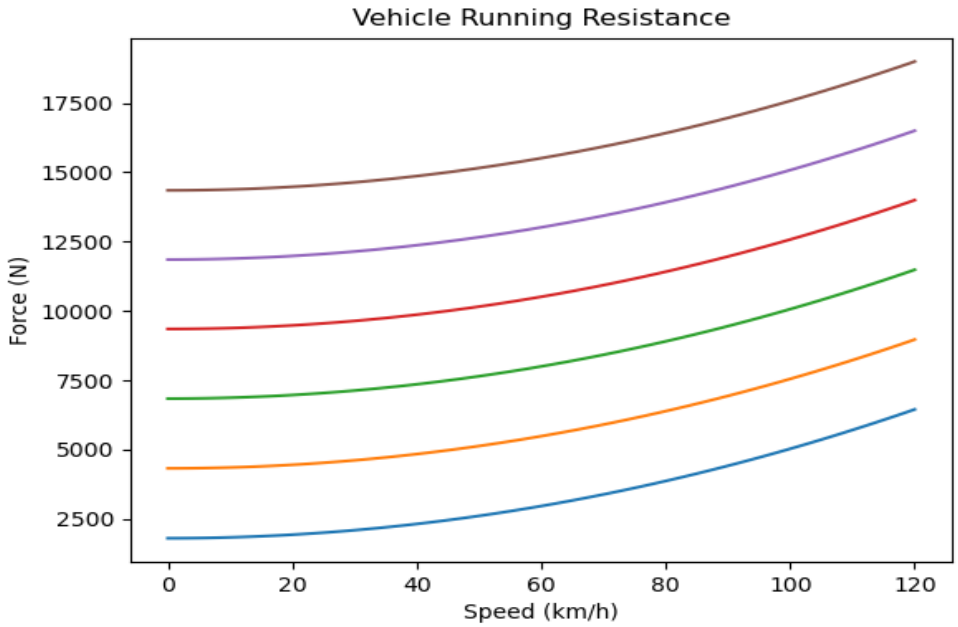
Grafik Vehicle Force Running Resistance



Grafik Vehicle Force Running Resistance



Grafik Motor Force Running Resistance



Kebutuhan Energi

V Cruise =
S Cruise =
t Cruise =
% Cruise =

Pt Cruise =
P Aux =
P Cruise =

E Battery =
P Battery =

Grafik Motor Cruise Running Resistance