

Lampiran 6. Data dan Perhitungan SFC

pertamax plus malam	195kg	205kg	215kg	225kg
t(sekon)	322,666	322,333	322	322
v(m/s)	4,748	4,753	4,758	4,758

pertamax plus siang	195kg	205kg	215kg	225kg
t(sekon)	322,66	321,33	321,66	321
v(m/s)	4,748	4,768	4,763	4,773

lpg malam	195kg	205kg	215kg	225kg
t (sekon)	323,33	322	321,66	321,66
v(m/s)	4,738	4,758	4,763	4,763

lpg siang	195kg	205kg	215kg	225kg
t (sekon)	323	320,66	320,33	321
v(m/s)	4,743	4,778	4,783	4,773

fuel consumption	195kg	205kg	215kg	225kg
fc(kg/jam) pertamax plus malam	0,52	0,554	0,586	0,633
fc(kg/jam) pertamax plus siang	0,5	0,523	0,56	0,612
fc(kg/jam) lpg malam	0,26	0,328	0,388	0,455
fc(kg/jam) lpg siang	0,241	0,288	0,363	0,422

Daya	195kg	205kg	215kg	225kg
Daya (hp) pertamax plus malam	0,88815	0,935433	0,982911	1,028445
Daya (hp) pertamax plus siang	0,888183	0,941307	0,984998	1,034887
Daya (hp) LPG malam	0,88449	0,937377	0,984998	1,030645
Daya (hp) LPG siang	0,886306	0,945261	0,993228	1,034887

Contoh perhitungan P traksi pada saat menggunakan bahan bakar pertamax plus:

$$A = 0,03936 \text{ m}^2$$

$$C_d = 0,25$$

$$\rho = 1,1644 \text{ kg/m}^3$$

$$C_{rr} = 0,015$$

$$F_{drag} = 0,5 \cdot \rho \cdot A \cdot C_d \cdot v^2$$

$$F_{drag} = 0,5 \times 1,1644 \text{ kg/m}^3 \times 0,03936 \text{ m}^2 \times 0,25 \times (4,748)^2$$

$$F_{drag} = 0,1291 \text{ N}$$

$$F_{rr} = C_{rr} \cdot m \cdot g \cdot \cos \theta$$

$$F_{rr} = 0,015 \times 195 \text{ kg} \times 10 \text{ m/s}^2 \times \cos 90^\circ$$

$$F_{rr} = 29,25 \text{ N}$$

$$F_{grad} = m \cdot g \cdot \sin \theta$$

$$F_{grad} = 195 \text{ kg} \times 10 \text{ m/s}^2 \times \sin 90^\circ$$

$$F_{grad} = 0$$

$$P_{traksi} = (F_{drag} + F_{grad} + F_{rr})v$$

$$P_{traksi} = (0,1291 + 0 + 29,25) \cdot 4,748$$

$$P_{traksi} = 662,2932 \text{ watt}$$

$$P_{traksi} = 0,8881 \text{ hp}$$

$$\text{Jadi, } sfc = \frac{fc}{P}$$

$$sfc = \frac{0,52}{0,8881}$$

$$sfc = 0,585 \text{ kg/hp.jam}$$

