

Table-1: Fuel supplied to the engine (data from Dyno-A)

L ↓	S→	1800 rpm	2400 rpm	3000 rpm	3600 rpm
		175 °F	185 °F	195 °F	205 °F
	160 ft-lbf	m1-A	m2-A	m3-A	m4-A
		lbm/hr	lbm/hr	lbm/hr	lbm/hr
		205 °F	175 °F	185 °F	195 °F
	120 ft-lbf	m5-A	m6-A	m7-A	m8-A
		lbm/hr	lbm/hr	lbm/hr	lbm/hr
		195 °F	205 °F	175 °F	185 °F
	80 ft-lbf	m9-A	m10-A	m11-A	m12-A
		lbm/hr	lbm/hr	lbm/hr	lbm/hr
		185 °F	195 °F	205 °F	175 °F
	40 ft-lbf	m13-A	m14-A	m15-A	m16-A
		lbm/hr	lbm/hr	lbm/hr	lbm/hr

Table-2: Fuel received from the engine (data from Dyno-B)

L ↓	S→	1800 rpm	2400 rpm	3000 rpm	3600 rpm
		175 °F	185 °F	195 °F	205 °F
	160 ft-lbf	m1-B	m2-B	m3-B	m4-B
		lbm/hr	lbm/hr	lbm/hr	lbm/hr
		205 °F	175 °F	185 °F	195 °F
	120 ft-lbf	m5-B	m6-B	m7-B	m8-B
		lbm/hr	lbm/hr	lbm/hr	lbm/hr
		195 °F	205 °F	175 °F	185 °F
	80 ft-lbf	m9-B	m10-B	m11-B	m12-B
		lbm/hr	lbm/hr	lbm/hr	lbm/hr
		185 °F	195 °F	205 °F	175 °F
	40 ft-lbf	m13-B	m14-B	m15-B	m16-B
		lbm/hr	lbm/hr	lbm/hr	lbm/hr

Table-3 : Fuel consumed by the engine

L ↓	S→	1800 rpm	2400 rpm	3000 rpm	3600 rpm
160 ft-lbf		175 °F (m1-A)-(m1-B) lbm/hr	185 °F (m2-A)-(m2-B) lbm/hr	195 °F (m3-A)-(m3-B) lbm/hr	205 °F (m4-A)-(m4-B) lbm/hr
120 ft-lbf		205 °F (m5-A)-(m5-B) lbm/hr	175 °F (m6-A)-(m6-B) lbm/hr	185 °F (m7-A)-(m7-B) lbm/hr	195 °F (m8-A)-(m8-B) lbm/hr
80 ft-lbf		195 °F (m9-A)-(m9-B) lbm/hr	205 °F (m10-A)-(m10-B) lbm/hr	175 °F (m11-A)-(m11-B) lbm/hr	185 °F (m12-A)-(m12-B) lbm/hr
40 ft-lbf		185 °F (m13-A)-(m13-B) lbm/hr	195 °F (m14-A)-(m14-B) lbm/hr	205 °F (m15-A)-(m15-B) lbm/hr	175 °F (m16-A)-(m16-B) lbm/hr

Where

- m1-A to m16-A are the average values obtained for the respected combination from the Dyno-A
- m1-B to m16-B are the average values obtained for the respected combination from the Dyno-B
- To get the fuel consumption by the engine, need to subtract Dyno-B values from Dyno-A values

To calculate the R_{Li} , R_{Sj} , R_{Tk} values use the corresponding values from the Table-3 and calculate corresponding K values. from these calculations you can calculate mass flow rate for 17 values. Compare this value with the experimental value obtained from Dyno-A and Dyno-B values for 17th combination.

You can also calculate the following based on the above table. These all considered as analytical method to predict the fuel consumption for any combination.

Also, you need to calculate and report other parameter, graphs in the report as mentioned in the lab handout.