

TFES Lab (ME EN 4650)

Spark Ignition Engine: Raw Data Sheet

Name: _____

Date: _____

Lab #: _____

T_{amb} : _____ ($^{\circ}\text{C}$)
 P_{amb} : _____ (mbar)
 V_{BDC}/V_{TDC} : _____ (compression ratio)
 Bore: _____ (mm)
 Stroke: _____ (mm)
 Timing: _____ (deg relative to TDC)
 Throttle: _____ (% of fully open)

| Combustion Test: Engine Performance | | | | | |
|---|--|--|--|--|--|
| Time interval, Δt (s) | | | | | |
| Crankshaft Speed, ω (rpm) | | | | | |
| Torque, τ (N*m) | | | | | |
| Fuel consumption*, V_{fuel} (cm ³) | | | | | |
| Air flow rate (L/min) | | | | | |
| Inlet air temp, T_{air} ($^{\circ}\text{C}$) | | | | | |
| Inlet fuel temp, T_{fuel} ($^{\circ}\text{C}$) | | | | | |
| Exhaust temp, $T_{exhaust}$ ($^{\circ}\text{C}$) | | | | | |

* displaced level of liquid fuel from fuel measurement tube (1 cm drop in flow tube = 5.1 cm³ volume)

| Dry-Run Test: Mechanical Losses | | | | | |
|-------------------------------------|--|--|--|--|--|
| Crankshaft Speed, ω (rpm) | | | | | |
| Torque, τ (N*m) | | | | | |