



**L3 Land-based Service Engineering - Task Sheet**

NAME:..................................................................................... DATE:................

**Reference: Task:**

*306/03 MEASURING ENGINE POWER*

**Requirements:**

Tractor capable of being put under stress

Dynamometer

Manufacturer’s specifications.

**Instructions:**

Measure engine power against engine speed

Record results on P1 & compare against manufacturer's specifications. *Do not fill out the ‘Torque’ column at this time.*

***(An Activity Sheet will not be required for this task)***

**Procedure:**

1. Prepare tractor as necessary: fluids etc.
2. Connect up to appropriate input shaft: 540 for <120hp; 1000 for >120hp, max. permissible 200hp.
3. Warm engine by placing it under light load at half-revs.
4. Remove load then set engine to high idle.
5. Load down the engine in steps as per proforma to 1200rpm recording output at each step.
6. On completion slowly release load **simultaneously** dropping back engine revs to prevent overspeeding.
7. Allow engine to ‘cool off’ at half revs with no load.
8. Dis-engage dynamometer and allow engine to idle to further stabilize.
9. Switch off engine and dis-connect dynamometer.

over/

**QUESTIONS**

1. What was the make & model of tractor tested?

2. What was the maximum power output for the engine tested? What should it be?

3. What was the rpm of the engine at this reading? What should it have been?

4. State FOUR reasons why discrepancies in measured readings may be at variance to manufacturer’s specifications.

*NOW HAND IN WITH YOUR PROFORMA P1*

**TASK COMPLETE**

Signed (Trainee):.......................................................... Date:...............................

Signed (Assessor):....................................................... Date:...............................