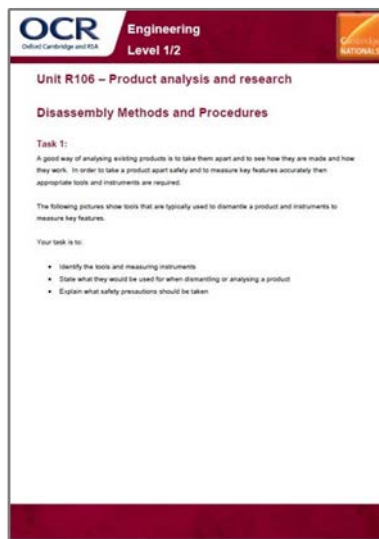


## Unit R106 – Product analysis and research

### Disassembly methods and procedures

#### ***Instructions and answers for teachers***

*These instructions should accompany the OCR resource ‘Disassembly Methods and Procedures’ activity which supports OCR Cambridge Nationals in Engineering.*



#### **The Activity:**

This resource comprises of 1 task.



*This activity offers an opportunity for English skills development.*



*This activity offers an opportunity for maths skills development.*

#### **Associated materials:**

‘Disassembly Methods and Procedures’ activity sheet

#### **Suggested timings:**

**Task 1:** 1 hour




**Learning Outcome 3: Be able to analyse an existing product through disassembly**






**Task 1:**

For this activity learners are required to identify a range of tools and measuring instruments that might be used in the disassembly and analysis of a product. The activity might be used as an introduction prior to learners dismantling and analysing an actual product.

Learners will need to identify the tools and measuring instruments in the photographs, state how they might be used to dismantle or analyse a product and explain what safety precautions should be taken. The teacher might wish to add to or substitute the tools shown and could also show learners real tools. The activity might be undertaken individually, in pairs or in groups.

The table gives some typical uses and safety precautions, although this is not an exhaustive list and learners may identify others.

Tool	Used for	Safety
Spanner 	Used to undo and remove nuts and bolts	Use correct size of spanner for nut/bolt  Ensure spanner does not slip – might cause injury to hand or knuckles
Side cutters 	Used to cut wires	Ensure not to cut or pinch skin, clothing or other items in cutters (apart from wire being cut)
Screwdriver 	Used to remove screws (flat head, hex head, torx)	Use correct type and size of screwdriver  Take care not to push screwdriver tip into hand or body

Tool	Used for	Safety
<p>Pliers</p> 	<p>Used to grip items</p>	<p>Use correct type and size of pliers</p> <p>Ensure not to pinch skin, clothing or other items in cutters (apart from item being gripped)</p>
<p>Allen Key</p> 	<p>Used to remove allen bolts</p>	<p>Use correct size of allen key for allen bolt</p> <p>Ensure allen key does not slip – might cause injury to hand or knuckles</p>
<p>Steel Rule</p> 	<p>Used to measure linear distance</p>	<p>Take care with any sharp corners on the steel rule</p>
<p>Vernier Caliper</p> 	<p>Used to measure inside and outside distance with high accuracy</p> <p>Might be used to measure outside or inside diameter</p>	<p>Take care not to pinch hands in measuring jaws</p>
<p>Micrometer</p> 	<p>Used to measure distance with high accuracy</p> <p>Might be used to measure outside diameter</p>	<p>Take care not to pinch hands in measuring jaws</p>

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**OCR Resources: *the small print***

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