

## What students will learn

When they have finished this section, students should know about:

- Things to check if an engine won't start or run properly
- Things to check to find the general condition of an engine.

## Things you need before you start

### Information

You will need ideas and information on:

Any typical faults on engines in your local area and conditions

### Equipment

Engines with faults (you could 'create' the faults yourself by disconnection wires, adjust things?) for student to work with.

### Activity

There is no specific activity for this module. Get students to work on your faulty engine(s).

## Note

The fault finding information on this worksheet is intended to give students a checklist of things to check and investigate if they have a problem with their engine.

The information is designed as a reminder to be used later – not as teaching or learning material.

## Work through each section with the students

### Talk about:

#### Working through fault finding in a *logical way*:

Is there

- fuel
- air and
- a spark

If any are missing – then what is the cause?

### Talk about

#### If the engine starts – but has some problems.

Again, look at each of fuel, air and spark to check there is

- enough of each
- of the right type, and
- at the right time

When they are sure these are all OK – then they can look for other causes.

Keep things simple – but make sure students understand the logical method and can follow the checklists.

## Talk about

2 stroke engines that will not start if fuel and ignition checks are OK.

- suspect worn seals around the crankshaft/crankcase
  - they will drop the compression of the fuel/air mix in the crankcase, so not enough will get into the cylinder.

## Show

The logical way you would work through finding a fault on one of your examples.

As you do this:

Ask students for *their* ideas on what to check next

Get *them* to do the checks

When you locate the fault – ask *them* what to do to fix it

**Help** students to work through finding other faults on other engines.