

Tools and equipment

What you will learn

This section recommends the tools and equipment you need to carry out the operator maintenance on your engine.

It recommends:

- The types and sizes of tools
- Other equipment
- Supplies and spare parts.

Things you need before you start

Materials

None

Tools

Look at your own tools and compare with those recommended.



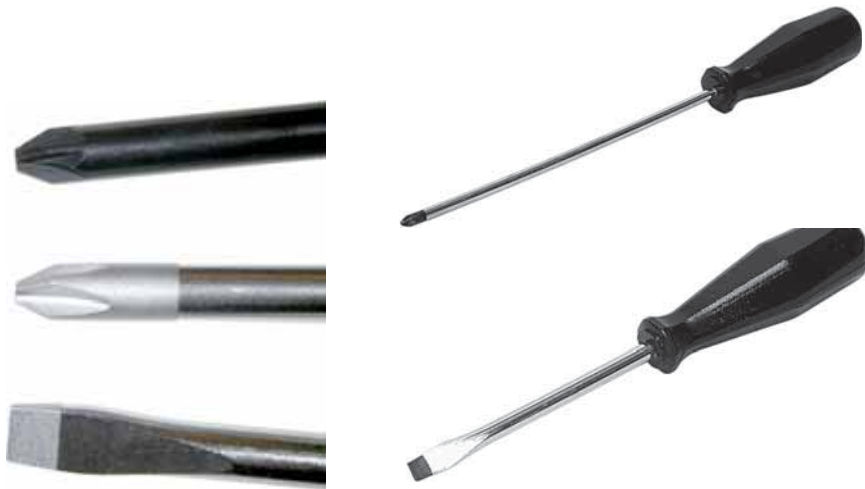
Tools and equipment

To look after your small engine you will need some basic hand tools and equipment

To do the jobs you cover in this course, you will need the sort of tools described in this section below.

Screw drivers

Different sizes of good screwdrivers – straight-bladed and cross-head types



Spanners

Open-end



or

Ring spanners/wrenches



or

A socket-set can make the job easier, but they are expensive



Spanner sizes

You need the exact sizes to fit the bolts on your engine.

Metric sizes are most common.

10 mm, 12 mm, 13 mm, 14 mm and 17 mm spanner sizes are used the most.

Older, or USA-made engines may use inch measurements. $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{3}{4}$ inch sizes are used most.

You also need a **spark plug spanner/wrench** to fit your type of spark plug (16 mm and 21 mm hex/nut sizes are the most common)

Two types of plug spanner



Others tools

Pliers and grips



regular



pointed

Feeler gauge



for setting spark plug gaps. These can be thin metal strips or the wire-gauge type. The 0.020" to 0.040" (0.75 to 1.5 mm) sizes should be OK for basic maintenance.



A stiff wire brush

for cleaning bolts and spark plug threads.



Funnel

drain can, plastic bowl or other container for used oil.



Soft paint brush



An old but **soft paint brush** (or tooth brush) for getting dust and dirt out of various places.

Old rags, paper towels, etc. for cleaning.

Grease gun

The big one takes grease cartridges and gives more pressure.



Supplies and parts

You will need oils, filters and spares to carry out the maintenance of your engine and equipment. Here is a suggested list of what you may need. Fill in the “Information about your engine” checklist.

Lubrication

- Grease
- Engine oil (4 stroke)
- Gear oil – outboards transmission
- Other special oil for your equipment
– such as bar oil for chainsaws
- CRC or WD40 spray



Filters

- fuel
- air
- oil



Spare parts

- Spark plug(s)
- HT lead and cap
- Spare starter cord
- Blades, cutters and other
special parts of your
equipment



Outboards

- Shear-pins for the propellor
- Emergency start cord

