

Free sample pages from the Soup Can Stirling engine

Prepare the can

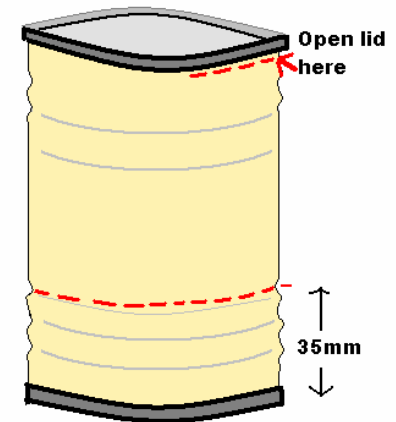
Take the lids off the cans using the type of opener that cuts into the side of the can rather than the lid, leaving the lid intact. Alternatively, use a rotary cutting disk or tin snips to cut off a complete lid. File down sharp edges.

Cut a can so it is 35 mm tall. Use the corrugations of the can to help draw a guide line. Cutting round the can is difficult. Don't try and take too much off at once. It's easier to chop the can down roughly to just above the line you have drawn, then you can cut a nice straight line by removing the last few mm of tin.

Wear protective gloves and eyewear when cutting cans, otherwise there will definitely be an accident!

The lid should fit back on the can (upside down); you may have to bend the rim of the can in by working around it with pliers,

You end up with a little, squat can; rub it all with medium grade abrasive so it is ready for soldering and painting.



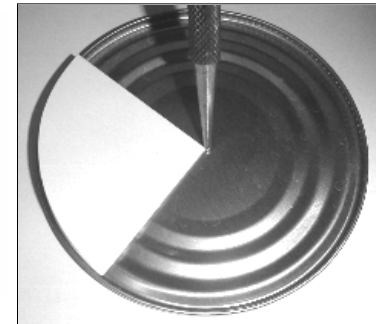
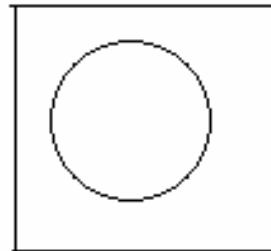
Drill a 2.5mm hole in the centre of the lid, or poke a hole with a sharp object big enough for the **Displacer shaft housing (1)**

To find the centre, draw round the lid on a piece of paper and cut it out.

Fold the circle in half twice.

Put it back on the lid, the centre is at the point of the triangle.

Mark the centre and draw a line across the diameter of the lid.



Measure 15mm from the centre, and drill another hole.
Scrape away the coating on the can around the holes



2 Displacer

(The following illustrations only show the centre hole for clarity)



Take a ball of aluminium foil and form a disk approx 90mm diameter and 15mm thick. Use the lid of the can as a “press”. This foil burger is the **displacer**.

The disk should be a loose fit inside the can with a 3-5mm gap all round. Centre the disk on the lid and use the central hole as a guide to pierce the displacer with a sharp needle.



Insert the **Displacer shaft (2)** into the central hole. Push the bent end of the shaft into the foil so that it countersinks itself and the bottom is flush.



When the can is reassembled, check that the shaft can rise and fall without the displacer touching the side

