

## The Sieg C-1 Lathe.

This is probably the smallest size of lathe that can be used to produce parts for a G3 loco and rolling stock. This lathe is sold by a number of suppliers in the UK under different names and paint schemes. However all the castings are common and it is possible to use the same parts from differing suppliers on the same lathe.

Supplier	Name	Colour	Type
Arc Euro Trade	Sieg C-1	RED	Metric and Imperial
Machine Mart	CL250M	YELLOW	Metric
Chester UK Tools	Cobra	YELLOW&WHITE GREY&GREEN	Metric Imperial
Warco	Micro Lathe	PEA GREEN	Metric and Imperial <b>(discontinued)</b>
Axminster Tools	C-1 Lathe	WHITE	Metric

**Note:** Whilst Warco have discontinued stocking the Micro Lathe, (early 2009), parts and accessories are still available from them -while stocks last.

### Manufacturers Specifications.

Swing over bed	140 mm
Distance between centers	250 mm
Hole through spindle	10 mm
Spindle taper	MT2
Tailstock taper	MT1
Spindle speed	100-2000 rpm±10%
Cross slide travel	50 mm
Motor output power	150 W
Range of threads	
Metric version	0.5-1.25 mm (5 thread pitches)
Imperial version	16-24 TPI (5 thread pitches)
Overall dimension (L x W x H)	620 x 300 x 220 mm
Weight (Net/Gross)	23/32 kg
Packing size (L x W x H)	680 x 350 x 390 mm

Some suppliers will offer their lathes with “pre-prepared” work done on it -this involves degreasing, degritting and setting all slides. If this is your first lathe then you are advised to take advantage of this service, however it will increase the lead time for delivery. The lathe is normally shipped to you on a “Kerbside Delivery” basis ,and you will have to lift and shift the ½ pallet that it is strapped to. This can be moved with a wheel barrow or two people can lift it to the place of use. Some suppliers offer “Full Return to Base” warranty -but you will have to crate the lathe yourself.

### Cleaning.

Prior to use clean all preservative grease from the lathe with car engine cleaner and rags. **After use throw the rags away.** Lightly oil all exposed machined surfaces with motor oil and use engine cleaner and rags again. **After use throw the rags away.** Finally use Mobil Vactra no. 2 oil to lubricate all slide ways, lightly oil all machined surfaces with motor oil -to prevent rust.

Once installed in its position -follow the **Daily and Weekly** oiling guide.

## Initial Startup.

The lathe will now require “running in”. Once you are satisfied that the chuck moves smoothly round by fingertips in both directions **-then and only then -**plug the lathe in...

Your supplier manual will give you a series of safety checks to follow prior to turning the chuck.

**DO NOT SKIP ANY OF THEM.**

The normal running in procedure is that the lathe is progressively run at higher and higher speeds for about a 60 seconds per “notch” on the speed dial. Finally the lathe is spun at full speed for 2 minutes and then taken down to stop a notch at a time over the course of another minute.

## Known Problems.

Mechanically the lathe is very robust -but the enamel does crack very easily. The main problems with this lathe relate to:

### The Fuse Holder.

This is of the screwdriver “push in and twist” type. It is not very robust and what frequently happens while the “learning” process is being progressed -is that the lathe often blows its 1 Amp fuse. The screwdriver top part of the fuse holder can break and it needs replacing. A more robust version of this is a standard part from MAPLIN Electronics, (circa £1.25p). Dependant on the thread , the hole might need to be bored out slightly with a broach. The front panel unscrews and the replacement is a fiddly -but easy job.

### The Circuit Board.

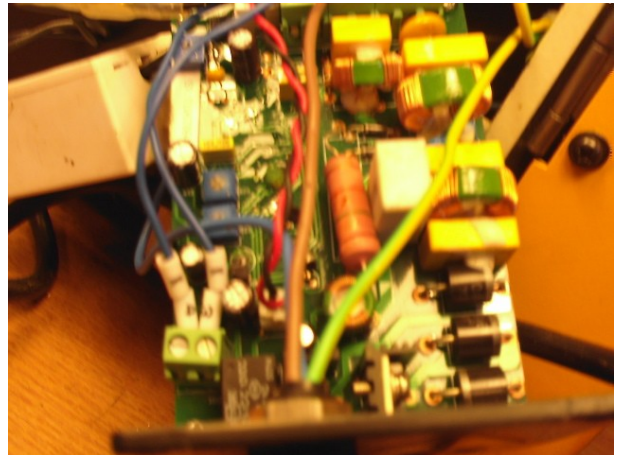
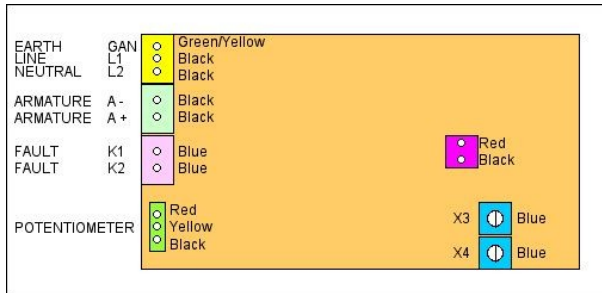
This is a thing that is perfectly reliable -or it is not... Most suppliers do a repair and exchange service. Common problems are running only at full speed regardless of the position of the control, erratic stopping from speed -or simply not turning...

There are two circuit boards used, they are **FC150B** (left) and **XMT2315** (right)



The circuit board is removed by unscrewing the panel where the mains lead is. The scrabble of cables may have looped around various exposed parts of the board so move slowly.

The following is a schematic for the **XMT2135** board.



**WARNING: X3 and X4 are always live when the lathe is plugged in.**

**X3 and X4 can be seen in the lower left of the board.**

Unfortunately both X3 and X4 are in a natural place to hold the board whilst it is being removed... The Earth connection for the mains is star earthed onto the screw inside the Gear Change Panel on the end of the lathe. Unscrew this **LAST**.

When re-assembling the board ensure that this is the connection made **FIRST**.

The cables all have rings with letters and numbers on them. Isolate the cables and rings together, (and don't drop any). The board is fixed to its carrier by four M3 screws.

## Accessories.

### Chucks & Faceplates

The lathe will take a 100mm 4 independent jaw chuck, or a 120mm faceplate , as a maximum. It comes with an 80mm 3 jaw self centring chuck as standard. You will need to procure an “adaptor plate” for a larger chuck from your supplier. This is supplied TOO LARGE to fit your replacement chuck. Mark the position of the 80mm chuck on the shaft. Remove the 80mm chuck, bolt up the adaptor plate and then using the cutters turn down the plate to fit the inner lip of the replacement chuck . Mark the position of the chuck on the plate and the plate on the shaft.

The chuck will now be true to the lathe. The face plate replaces the adaptor plate.



The largest tail stock chuck is 10mm.

### Slides.

The two slides that are available are the compound slide tool post (left) and the vertical slide (right). The compound slide is used for cutting curves or angled tapers up to 30mm long. The vertical slide is used for milling operations in the lathe.



These tend to be in short supply and there can be some delays in back orders.

## Tools.

Due to the low power of the motor the tools best used on this lathe are Tungsten Carbide Tipped. These are available from the very basic individual £2 each to sets of indexable tipped ones at £80. The tool size is 8mm.



## Steadys.

The two standard steadys -the Travelling Steady (left) and the Fixed Steady (right) are available.



## Tool Posts.

The standard tool post has a fixed and a dished side for angling the tip. Quick release tool posts are available.



Others.

Ball Turning cutter.



Lathe Dog.



Wood work rest.



Thread Cutting Gears (Imperial and Metric).



Milling Head.

Machine Mart sell this as an “add on” to their CL-250M lathe. This part number CL-251MH. This bolts to the back of the slide.

Chester UK sell this configuration pre-assembled as: “Cobra 3-in-1”

