

CLARK® WOODWORKER



BELT & DISC SANDER

MODEL No. CS6-9C

Part No. 6500420

OPERATING & MAINTENANCE INSTRUCTIONS



0206

Clarke[®]
INTERNATIONAL



DECLARATION OF CONFORMITY

We declare that this product complies to the following standards/directives:

- **73/23/EEC**
- **EN 60 335**
- **89/336 EEC**

Product Description: **BELT & DISC SANDER**
Model Number: **CS6-9C**
Serial (Batch) No: **See Product Data Plate**

Signed 
Service Manager

Clarke[®] INTERNATIONAL
Hemnal Street, Epping, Essex CM16 4LG

DOC No. 2001/10

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Clarke

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WOODWORKER

Thank you for purchasing this CLARKE Belt and Disc Sander, which is designed for workshop use and comprises a 9" dia. sanding disc and a 6" wide sanding belt.

This machine is designed for sanding WOOD ONLY. DO NOT USE for sanding asbestos, or materials containing asbestos, painted surfaces, or materials which produce toxic dust. Do not use for sanding magnesium as this produces a highly flammable dust.

Before attempting to operate this machine, please read this instruction manual thoroughly and follow all directions carefully. By doing so you will ensure the safety of both yourself and others around you, and at the same time, you should look forward to long and trouble free service from your Sander.

GUARANTEE

This product is guaranteed against faults in manufacture for 12 months from purchase date. Keep your receipt as proof of purchase.

This guarantee is invalid if the product has been found to have been abused in any way, or not used for the purpose for which it was intended, or to have been tampered with in any way. The reason for return must be clearly stated.

This guarantee does not affect your statutory rights.

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PARTS & SERVICE

Please contact your dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400
PARTS & SERVICE FAX: 020 8558 3622
or e-mail as follows:
PARTS: Parts@clarkeinternational.com
SERVICE: Service@clarkeinternational.com

GENERAL SAFETY RULES

1. **ALWAYS** KEEP GUARDS IN PLACE and check they are not damaged.
2. **ALWAYS** REMOVE ADJUSTING KEYS AND WRENCHES. Make a habit of checking to see that all adjusting keys and wrenches are removed from machine before turning it on.
3. **ALWAYS** KEEP WORK AREA CLEAN. Cluttered areas and work benches invite accidents
4. **ALWAYS** KEEP CHILDREN AWAY. All visitors, but in particular children, should be kept at a safe distance away from the work area.
5. **ALWAYS** MAKE YOUR WORKSHOP CHILDPROOF with padlocks, master switches, or by removing starter keys.
6. **ALWAYS** WEAR THE PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or any other jewellery which might get caught in moving parts. Non-slip footwear is recommended. Long hair should be contained.
7. **ALWAYS** USE SAFETY GLASSES. Everyday glasses only have impact resistant lenses, they are not safety glasses. Also use a face mask if a lot of dust is generated.
8. **ALWAYS** KEEP A FIRM FOOTING and proper balance at all times.... do not overreach.
9. **ALWAYS** DISCONNECT FROM THE MAINS before attempting any kind of service work or adjustment or when changing accessories such as grinding wheels.
10. **ALWAYS** MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance.
11. **ALWAYS** make sure switch is in the OFF position before plugging in order to reduce the risk of unintentional starting.
12. **ALWAYS** CHECK FOR DAMAGED PARTS. Before using the machine, check parts for signs of damage, and to ensure they are secure. If a component suffers slight damage, (eg. a distorted guard or bracket), make sure it will perform its intended function properly before switching on. If in doubt, do not use the machine. ALWAYS be prepared to SWITCH OFF IMMEDIATELY, if you experience unusual noises, or excessive vibration. Do not use the machine until the fault is fully rectified.
13. **NEVER** FORCE YOUR Sander. It will do a better and safer job if used at the rate for which it was designed.
14. **NEVER** USE IN A DANGEROUS ENVIRONMENT. Do not use any power tools in damp or wet areas, or expose them to rain. Keep work area well lit.

ADDITIONAL SAFETY RULES FOR SANDERS

1. **ALWAYS** wear eye protection
2. **ALWAYS** use the work stop or table to support the workpiece.
3. **ALWAYS** check to ensure the table and sanding belt arm and attachments are secure before starting.
4. **ALWAYS** maintain a clearance of 2mm between table and sanding belt or disc.
5. **ALWAYS** hold the workpiece firmly so that it cannot be ripped from your hands
6. **ALWAYS** feed the workpiece against the direction of rotation of the disc or belt.

WARNING! Use ONLY for sanding WOOD. DO NOT DO NOT USE for sanding asbestos, or materials containing asbestos, painted surfaces, or materials which produce toxic dust. Do not use for sanding magnesium as this produces a highly flammable dust.

ELECTRICAL CONNECTIONS

Connect the mains lead to a standard, 230 volt (50Hz) electrical supply through a fused good quality 13 amp BS 1363 plug, or a suitable fused isolator switch.



WARNING: THIS APPLIANCE MUST BE EARTHED

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Green & Yellow	-	Earth
Blue	-	Neutral
Brown	-	Live

As the colours of the flexible cord of this appliance may not correspond with the coloured markings identifying terminals in your plug, proceed as follows:

- Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol "⏏" or coloured GREEN or GREEN & YELLOW.
- Connect BROWN cord to terminal marked letter "L" or coloured RED.
- Connect BLUE cord to terminal marked letter "N" or coloured BLACK.

We strongly recommend that this unit is fitted with a Residual Current Device (RCD).

FUSE RATING

The fuse in the plug for this appliance must be rated at **13 amps** and any replacement must be ASTA approved to BS1362.

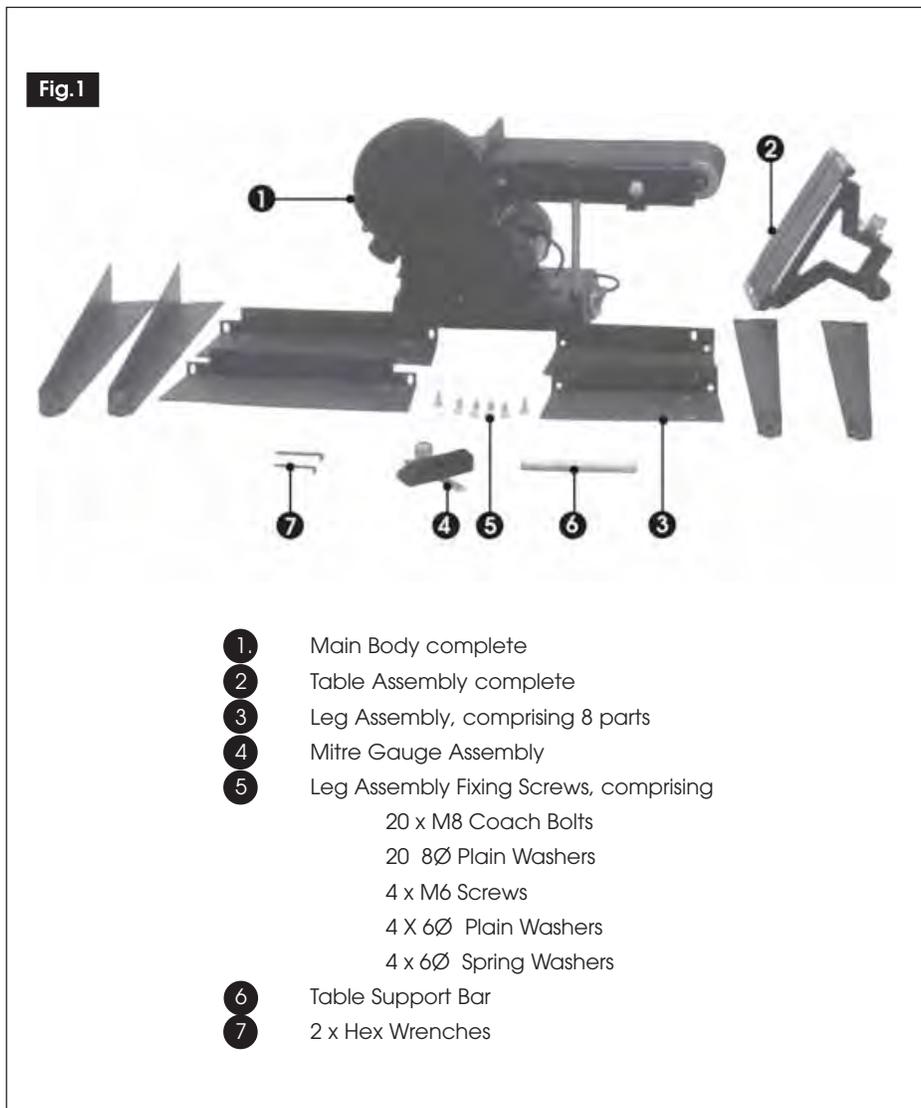
IMPORTANT NOTICE

If this appliance is fitted with a plug which is moulded on to the electric cable (i.e. non rewirable) please note:

1. This plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted in a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer, or an electrical stockist.
5. The fuse in the plug must be 13Amps,

PRE-ASSEMBLY CHECK

Unpack the carton and lay out the components and loose items. Check against the list below to ensure that all parts are present. If any damage has occurred during transit, please contact your Clarke dealer immediately.



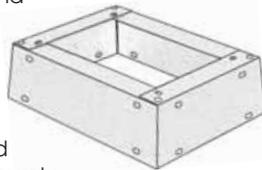
ASSEMBLY

1. Assemble the stand in the manner shown in **Fig.2**. The four top panels are secured with a single bolt, with flat washer, in each corner, and the legs are then bolted on, followed by the leg braces.

Do not tighten the nuts until all bolts are in place and the stand is rocked vigorously to ensure it is stable. When satisfied, tighten securely.

Fig.2

2. **WITH ASSISTANCE**, considering its weight, raise the machine and place it on top of the stand. Manoeuvre it so that the bolt holes, viewed from below, line up. Enter the M6 screws fitted with flat and lock washers and tighten securely.



3. Screw the Belt Tensioning Lever (**see Fig.4**) securely into its housing.

NOTE:

Except for the table, your Sander is now fully assembled. The location of the Table will depend upon the job in hand, i.e. either adjacent to the disc or the belt. Table fitting and adjustments are described on pages 8 and 9.

The machine is fitted with a Sanding Disc and Sanding Belt at the factory.

CHECKS BEFORE USE

As with all machinery, it is important to ensure that the various components are properly secure and in good order before use.

The machine is designed so that when switched ON, both the belt AND the disc will rotate. It is also important therefore, to ensure that the belt runs true on the rollers, referred to as 'Tracking'. Although the necessary adjustments have been carried out at the factory, it is nevertheless prudent to perform this check when first setting up your machine, in the event it has been disturbed during transit.

Belt Tracking Check

The rollers must run parallel, otherwise the belt will be driven off to one side. To perform the check, ideally the belt should be in the vertical position, as this position provides greater safety for the operator.

To raise the belt to its vertical position, slacken off the two securing screws, one of which is shown in **Fig. 3**, the other is diametrically opposed. Then raise the arm, and retighten the two screws.



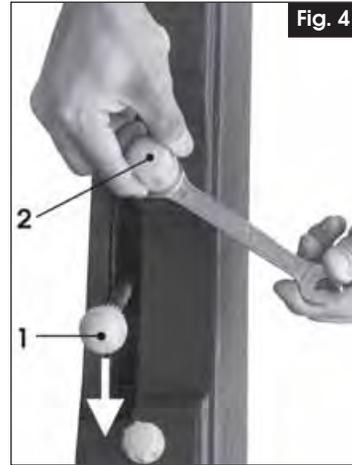
With the belt raised, ensure that nothing can interfere with the disc or belt, and that the Belt Tensioning Lever (1, Fig.4), is pushed fully to the rear - in the direction of the arrow.

Plug in to the mains supply and press the GREEN ON button, marked 'I' to start the machine. Keeping well away from the belt.

Observe the belt as it passes over the front (top) roller...there should be no creep to one side. If it does creep, switch OFF by pressing the RED OFF button, marked 'O'.

Adjacent to the belt tensioning lever, is the Roller Adjustment Knob (2, Fig.4). Slacken the locknut as shown in fig. 4 and back the nut off a turn or two.

Restart the machine, and screw the Adjuster Knob very gently in or out to compensate for the creep. When the belt is running true, switch OFF and tighten the locknut, ensuring you do not allow the adjuster knob to turn. When satisfied, restart and check. If necessary, repeat until the belt runs true.



FITTING THE TABLE

A ...to the Disc

The Table is mounted on a Support Bar (6, Fig.1 and 1, Fig.5). 'Flats' are milled at each end of the bar. Insert the end with the shorter length flat into the housing on the machine.

NOTE: It may be necessary to unscrew the two securing screws (2, Fig.5) in order for the bar to be inserted fully.

Tighten the securing screws.

Slide the table assembly on to the support bar, and bring the table to within 2mm of the disc, then tighten the two securing screws (1, Fig.6).

To ensure the table is at exactly 90° to the disc, place a small engineers square on the table and bring up to the disc. Slacken off the Table Angle Adjustment Knob, shown in Fig.5, and adjust accordingly so that the table is true.

Tighten the adjustment knob, and if necessary, zero the pointer, adjacent to the scale, by slackening the securing screw and repositioning.



B...to the Belt

Before attempting to attach the table to the belt mounting, raise the belt arm and secure with the two securing screws, as explained under 'Checks Before Use', p7.

Slide the Table Support bar into the mounting as shown in **fig. 6** with the shorter flat on the end of the bar - inwards. Tighten the two securing screws.

Mount the table on the support bar, bring to within 2mm of the belt and tighten the securing screws (**1, fig 6**).

To ensure the table is square, proceed as previously described for squaring the table to the disc.

When using the table with the sanding belt, remove the work stop from the belt by removing the two securing bolts as shown in **fig. 7**.

Ensure the screws are replaced and tightened before use. The lower screw also secures the Lower Belt Guard. Ensure this is properly in place when tightening. Ensure also, the flat washer is used with the upper bolt.

ENSURE the work stop is relaced correctly - see Using the Belt on page 10.

Fig. 6

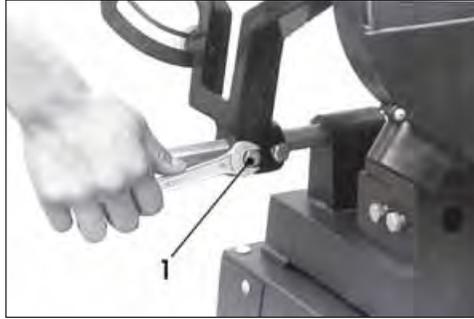


Fig. 7



METHODS OF USE

 **WARNING!** Always observe the proper safety precautions before use. Remember, failure to observe these precautions could be extremely hazardous.

A. Using the Disc

Check to ensure the table is no more than 2mm from the disc, before switching ON.

Hold the work firmly, as shown in **fig. 8** and ALWAYS hold the workpiece against the left half of the disc. i.e. that half moving downwards towards the table.

DO NOT exert too much pressure. A light touch is all that is required.

Fig. 8



Fig. 8A shows the table being used in conjunction with the Mitre Gauge.

Set the gauge to the angle you require and hold the workpiece firmly against the gauge, feeding it gently into the disc.

Keep the workpiece in contact with the left side of the disc as far as possible.



Fig. 8B shows the table set to an angle. The mitre gauge may also be used with this setup.

Angles up to 45° may be set.

If accuracy is required, check angle using a suitable square or template.



B. Using the Belt

The Work Stop must be in place when using the belt horizontally.

Bolt on as shown in **Fig.9**, ensuring the flat washer is used between the inner face of the fence and the body on the upper bolt.

The lower bolt also secures the lower blade guard.

When tightening the bolts, ensure a gap of no more than 2mm exists between the belt and the work stop, as indicated.

The belt is used for long pieces, as shown in **Fig. 9A**. The workpiece is held firmly against the work stop.

DO NOT exert too much pressure - a light touch is all that is required.

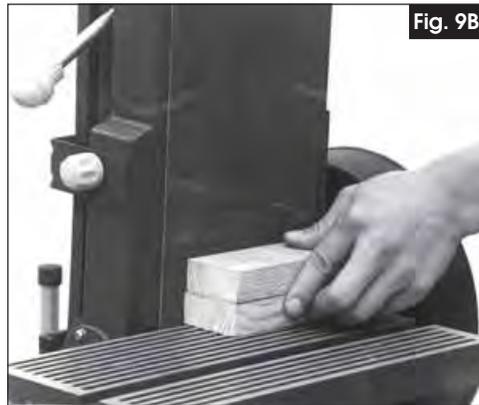


Curves may be sanded as shown in **Fig. 9A**



...or the belt used in the vertical position as shown in **Fig.9B**.

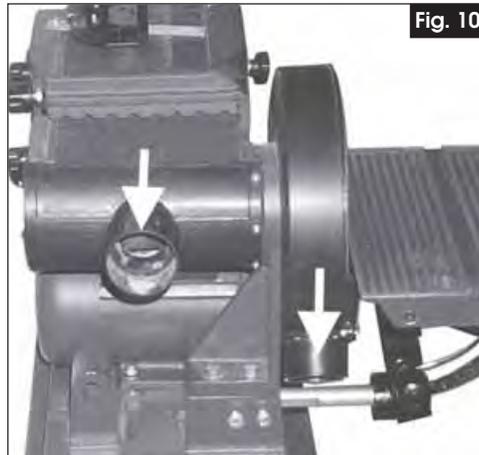
NOTE: The work stop has been removed.



DUST EXTRACTION

Provision is made for forced dust extraction on both the disc AND belt. The dust extraction outlets are shown in **Fig.10** and have an outside diameter of 56mm (2¹/₄").

Connect a suitable hose to a vacuum cleaner via a reducer, or Dust Extraction device (see your Clarke dealer).



MAINTENANCE



CAUTION: Before carrying out any maintenance or servicing, ALWAYS ensure the plug is disconnected from the mains supply.

A. Changing the Belt

1. Raise the table and secure in the vertical position.
2. Remove the lower Belt Cover, by slackening the four securing screws sufficiently for the cover to be slipped off.
3. Remove the screw securing the dust hand (or rear) mounting.
4. Slide the Belt Tension Lever fully FORWARD. (As the Belt Arm is vertical, this would be - UPWARDS).
The belt may now be slipped off and replaced by a new one.

Fig. 11



5. Tension the belt by sliding the tensioning lever backwards (downwards), then replace the belt cover.
6. Proceed to check belt tracking, as described on page 7

Fig. 12

B. Changing the Disc

1. Remove the disc side cover as shown in **Fig. 12**, then peel off the disc.



Fig. 12A

2. Clean any excess adhesive from the face of the disc, if any, and replace with a new disc, ensuring it is firmly attached.
3. When satisfied, replace cover.



ACCESSORIES

Replacement Discs and Belts are available in packs of 5 from your local dealer. Please quote the part numbers below.

A. 6" Replacement Belts (150 x 1219mm)

Grit size	Part No.
Fine	6502098
Medium	6501164
Coarse	6502103

B. 9" Replacement Discs (230mm)

Grit size	Part No.
Fine	6502099
Medium	6501076
Coarse	6502100

SPECIFICATIONS

Motor	230V 50Hz 1Ph
Power Rating	750W (1HP)
Speed	2850RPM
Input Current	4Amps
Fuse Rating	13Amps
Belt Speed	5.6 M/s
Belt Size	150 x 1219mm (6x48in)
Disc Speed	1400RPM
Disc Size	230mm (9in)
Gross Weight	51.5kg
Model No.	CS6-9C
Part No.	6500420

PARTS LIST

No.	Description	Part No.	No.	Description	Part No.
1	Rubber pad	HTCS6901	43	Screw M4x12	HTCS6943
2	Side plate	HTCS6902	44	Washer	HTCS6944
3	Bolt M8x12	HTCS6903	45	Drive roller shaft	HTCS6945
4	Nut M6	HTCS6904	46	Key B5x28	HTCS6946
5	Washer	HTCS6905	48	Dust extraction outlet cover	HTCS6948
6	Long plate	HTCS6906	49	Screw M8x12	HTCS6949
7	Bolt	HTCS6907	50	Drive roller	HTCS6950
8	Short plate	HTCS6908	51	Work stop	HTCS6951
9	Nut M8	HTCS6909	52	Flat Washer	HTCS6952
10	Screw M4x8	HTCS6910	53	Motor	HTCS6953
11	Switch box	HTCS6911	54	Ball bearing 80103	HTCS6954
12	Safety switch	HTCS6912	55	Button ring	HTCS6955
13	Fixed plate	HTCS6913	56	Shaft cover	HTCS6956
14	Button ring	HTCS6914	57	Screw	HTCS6957
15	Ball bearing 80201	HTCS6915	58	Bracket	HTCS6958
16	Roller shaft	HTCS6916	59	Support shaft	HTCS6959
17	Roller wheel	HTCS6917	60	Nut M6	HTCS6960
18	Sustain shaft	HTCS6918	61	Screw M6x30	HTCS6961
19	Spring pin 4x16	HTCS6919	62	Mitre gauge	HTCS6962
20	Screw M5x8	HTCS6920	65	Table	HTCS6965
21	Spring	HTCS6921	66	V-belt	HTCS6966
22	Shaft	HTCS6922	67	Motor pulley	HTCS6967
23	Knob	HTCS6923	68	Pulley cover	HTCS6968
24	Cover securing knob	HTCS6924	69	Screw M5x16	HTCS6969
25	Guard	HTCS6925	70	Screw M8x12	HTCS6970
26	Sanding belt	HTCS6926	71	Shaft pulley	HTCS6971
27	Screw M5x16	HTCS6927	72	Sand disc	HTCS6972
28	Washer	HTCS6928	73	Sand paper	see Accessories
29	Elastic washer	HTCS6929	74	Screw M6x16	HTCS6974
30	Adjustment plate	HTCS6930	75	Washer	HTCS6975
31	Nut M4	HTCS6931	76	Angle Gauge	HTCS6976
32	Spring	HTCS6932	77	Table support bracket	HTCS6977
33	Adjusting plate	HTCS6933	78	Pointer	HTCS6978
34	Moving plate	HTCS6934	79	Plug & cable	HTCS6979
35	Spring	HTCS6935	80	Bolt	HTCS6980
36	Base	HTCS6936	81	Knob	HTCS6681
37	Plastic clip	HTCS6937	82	Bearing cover	HTCS6982
38	Nut M16	HTCS6938	83	Knob	HTCS6983
39	Support bolt	HTCS6939	84	Bolt	HTCS6984
40	Rubber sleeve	HTCS6940	85	Disc cover	HTCS5985
41	Sand belt frame	HTCS6941	86	Screw	HTCS6986
42	Ball bearing 80102	HTCS6942			

PARTS DIAGRAM

