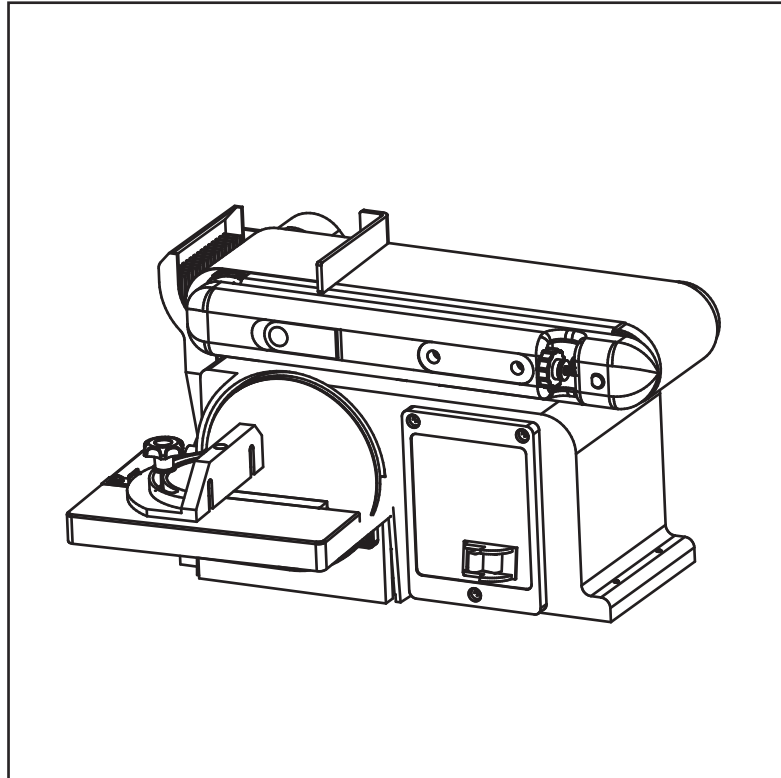




## 100mm x 150mm Belt & Disc Sander

MODEL BD46C



Owner's Manual

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### Specifications

Model #	BD46C
Motor Type:	Induction
Motor Ratings:	230V AC, 50 Hz, 375W
Motor Speed:	2850 RPM (no load)
Disc Diameter:	150 mm
Disc Specifications:	A80 psa type (Pressure Sensitive Adhesive)
Belt Size:	100 x 914 mm
Belt speed:	1900 SFM
Belt Tilt:	0 - 90°
Belt Grit:	A80
Net Weight:	18.6 kg

# Important Safety Rules

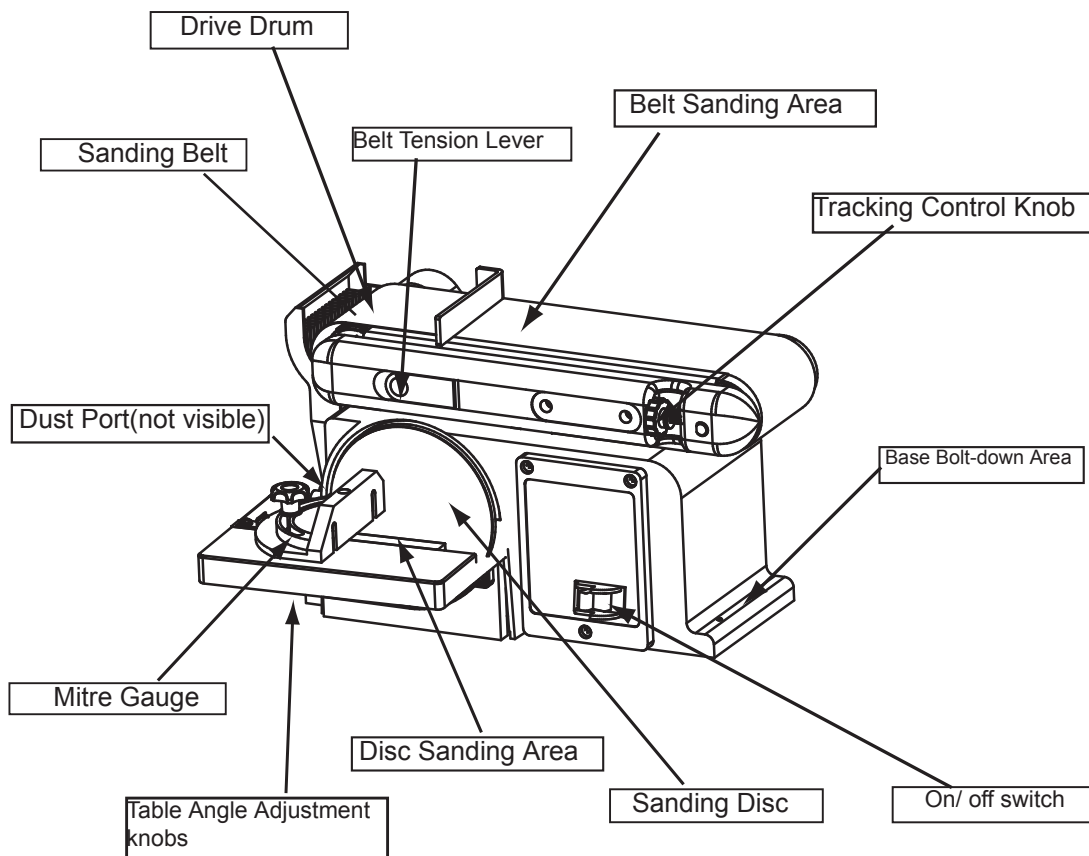
**DANGER!!** Failure to observe any of the following instructions could result in severe personal injury to tool user and bystanders or cause damage to tool and property!

**WARNING! – Read, understand and observe all instructions in this manual before using or operating the tool for which it is written and supplied. Ensure that anyone who is to use the tool has read and understood the instructions provided.**

- **Always** wear eye protection that complies with a recognized standard (CSA or ANSI).
- Wear a mask or respirator when dust is generated.
- Some dust created by power sanding contains chemicals that may cause cancer, birth defects or other harm. Some examples of these chemicals are: lead from lead-based paint, and arsenic and chromium from chemically treated lumber. To reduce exposure to these chemicals, work in a well-ventilated area; use approved safety equipment; and use dust masks that are specially designed to filter out microscopic particles.
- Keep bystanders out of the work area while operating the tool.
- **WARNING! Always ensure that the work area is clear of any flammable materials, liquids or gasses, because the use of this tool may create sparks.**
- Keep guards in place and working properly.
- Keep hands clear of sanding areas.
- Ensure sanding belt runs in the proper direction. Sanding belt must travel down at the front of the machine.
- Ensure sanding belt is tracking properly so that it does not come off the pulleys.
- Unplug from power supply before adjusting or servicing.
- To avoid electric shock, **DO NOT** use in damp conditions or expose to rain.
- Use only accessories that are recommended by the manufacturer for your model.
- Grounded tools must be plugged into an outlet that has been properly installed and grounded in accordance with all local codes and ordinances. Never remove the grounding prong from the plug or modify it in any way. Do not use adaptor plugs. If in doubt as to whether the outlet is properly grounded, consult a qualified electrician.
- Do not use the tool when tired or under the influence of drugs, alcohol or medication.
- Do not wear loose clothing or jewellery. Keep hair tied back.
- Ensure the power switch is off prior to plugging in the tool.
- Ensure sanding belt or disc is not torn or loose.
- Hold workpiece firmly while sanding.
- Firmly support workpiece with mitre gage, backstop, jig or worktable when sanding with the belt.
- AVOID kickback by sanding in accordance with directional arrows. **Sand on downward side of disc only!**
- **DO NOT** attempt to hold pieces of material that are too small to be safely supported by hand. Utilize special jigs or hand tools.
- **Remove** scrap pieces and other loose objects from the belt and disc tables before turning the machine on.
- When sanding metal, move the metal across the belt or disc and cool it when it becomes hot.
- **WARNING! Do not operate your belt & disc sander until it is completely assembled and installed according to the instructions.**
- Service on these tools should only be performed by an authorized, qualified technician.
- **SAVE THESE INSTRUCTIONS.**

## Know Your Belt & Disc Sander

- On/off switch
- Sanding disc
- Belt sanding area
- Disc Sanding Area
- Table angle adjustment knobs
- Dust port
- Mitre gauge
- Base – bolt-down area
- Tracking control knob



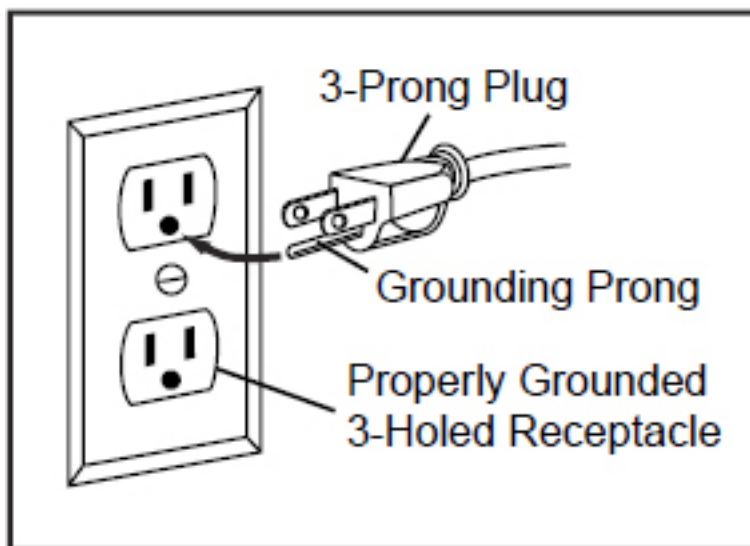
## Operating Instructions

### Before You Start – Electrical

In the event of a malfunction or short circuit, grounding provides the path of least resistance for electrical current and reduces the risk of electric shock for the operator. This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching outlet that is properly installed and grounded in accordance with ALL local codes and ordinances.

**DO NOT MODIFY THE PLUG PROVIDED.** If it will not fit the outlet, have the proper outlet installed by an electrician.

Figure 2



**IMPROPER CONNECTION** of the equipment grounding conductor can result in increased risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, **DO NOT** connect the equipment grounding conductor to a live terminal.

**CHECK** with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure if the tool is properly grounded.

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated. The original tool has a grounding plug that looks like the plug illustrated (Figure 2).

## **Use of Extension Cords**

USE ONLY THREE-WIRED EXTENSION CORDS that have 3-prong plugs and 3-holed outlets that accept the tool's plug. Repair or replace damaged or worn cords immediately.

Be sure your extension cord is properly wired and in good condition. Do not use damaged extension cords. Always replace a damaged extension cord.

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating.

Use a separate electrical circuit for your tools. This circuit should not be less than a #12 gauge wire, and should be protected with a 15 A time-lag fuse or breaker. Before connecting the motor to the power line, ensure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor's nameplate. Running at a lower voltage will damage the motor and this damage is not covered by warranty.

## Before You Start - Unpacking

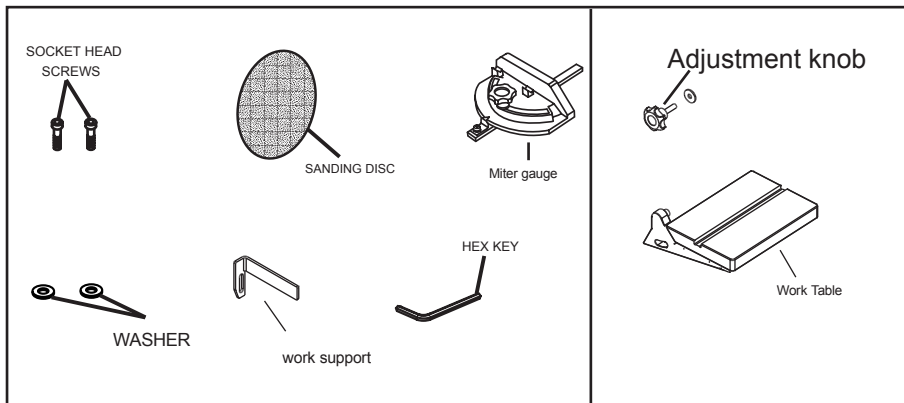
Your Tooline belt & disc sander has been shipped completely assembled with the exception of: the sanding disc, disc guard, mitre gauge, work support and worktable.

Carefully remove all parts from the shipping carton. Do not discard the packing material until you have carefully inspected the belt & disc sander, identified and located all parts, and satisfactorily operated your new tool. If all parts are present, proceed to assembly.

Examine all parts to ensure no breakage has occurred during shipping. Missing or damaged parts should be replaced before use. Should you discover or suspect that parts are missing or damaged, do not return to the store. Call (Toll-Free) the number on the front of this Owner's Manual.

## Parts & Accessories List

1. Socket head screws
2. Sanding disc
3. Mitre gauge
4. Washers
5. Work support
6. Hex key 15/64" (6 mm)
7. Worktable
8. Adjustment knob



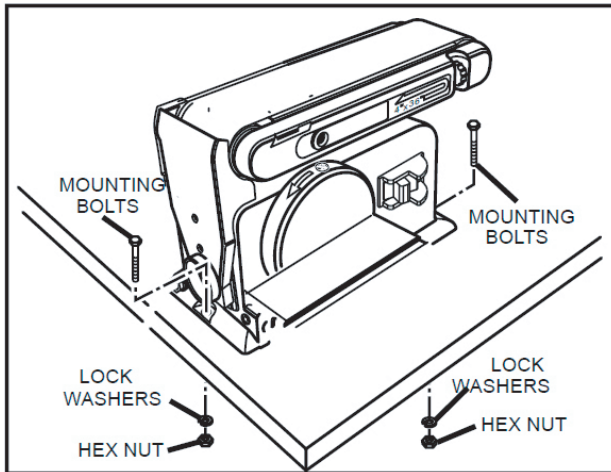
## Before You Start – Assembly and Installation

**WARNING!** Always ensure the sander is unplugged prior to attempting any assembly, installation or changing of parts and accessories.

### Mounting the Sander to the Workbench

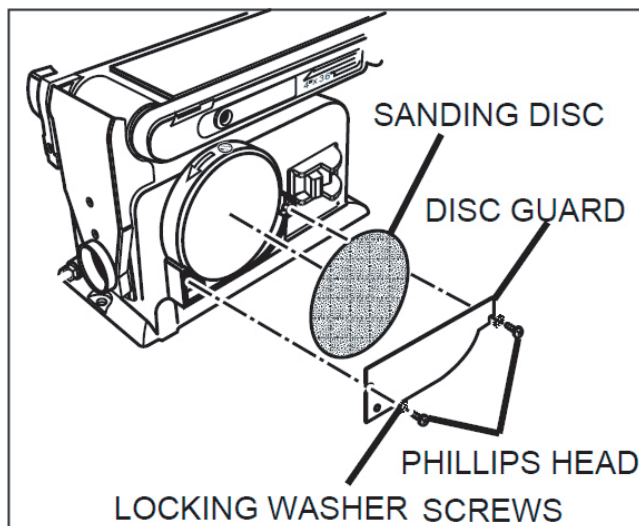
**CAUTION:** If during operation there is any tendency for the sander to tip over, slide or walk on the supporting surface, the sander should be properly mounted to a workbench or stand.

1. Position the sander on the workbench where you expect/intend to use it.
2. Mark the workbench through the mounting holes located in the sander base. Drill holes in the workbench at the marks.
3. Using long bolts, washers, locking washers and nuts, as shown (not supplied), secure the sander to the workbench. Note: All bolts should be inserted from the top. Washers and hex nuts should be fastened from the underside of the workbench.



### **Installation of Sanding Disc and Guard**

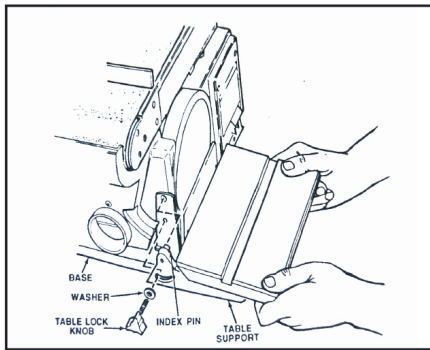
1. Peel backing away from sanding disc.
2. Align perimeter of disc with plate, and press disc firmly into position on plate, leaving no loose edges.
3. Position disc guard against lower 1/3 of disc, aligning holes as shown. And use a screwdriver to fasten the provided screws and washers securely.

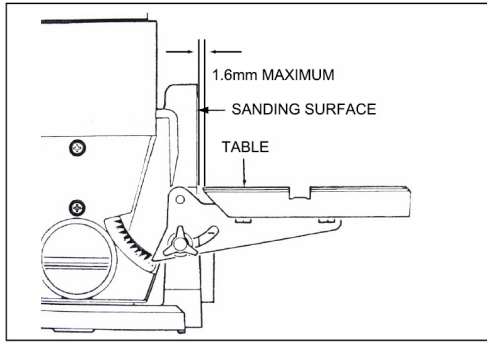




### **Mounting of Table Assembly**

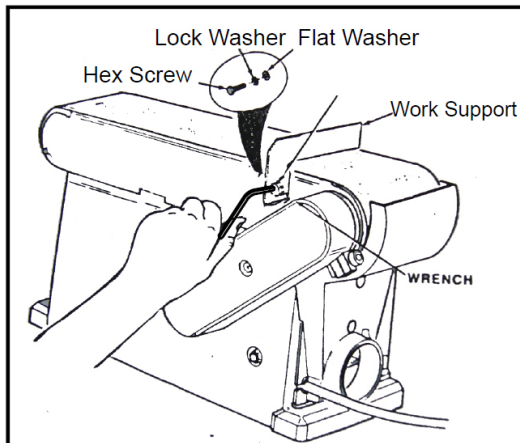
1. Locate table-lock knob and washer in parts bag.
2. Position table-support bracket so that "index pin" fits into corresponding hole on sander frame and semi-circular hole aligns with threaded hole in frame.
3. Place washer on threaded shaft of table-lock knob, insert through semi-circular slot, and tighten into threaded hole.
4. Adjust table to level or to angle desired for sanding.





**Installation of Belt-Sander work support**

1. Locate work support and hex screw, washer and locking washer.
2. Hold work support in position and fasten as shown. Do not overtighten.

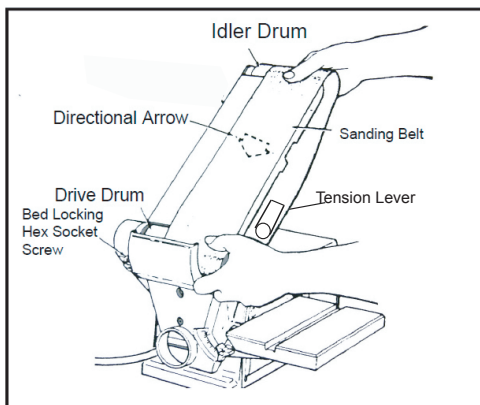


## **Installing or Changing Accessories – Sanding Belts**

**WARNING!** Turn the power off and remove the plug from the outlet before changing the accessories.

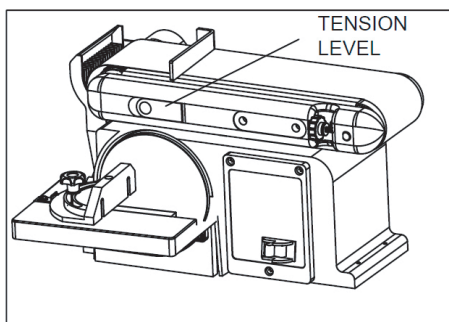
### **Removal:**

1. Slide tension lever to the right to release the belt tension.
2. Slide the used sanding belt off of the rotational mechanism.



### **Installation:**

1. Slide new belt over the belt rotational mechanism – sanding drums. Ensure the belt is centred on both drums (ends of mechanism).
2. Slide the tension lever to the left to apply tension to the belt.
3. Before using, check belt tracking as described in “Belt Tracking” section, and adjust as necessary.

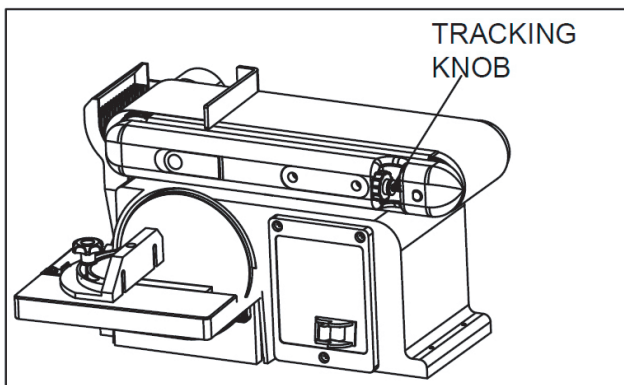


### **Belt Tracking**

The belt-tracking adjustment is set at the factory so that the abrasive belt will run true on the drums. If, however, the belt should track to one side or the other, an adjustment can be made by turning the tracking knob, which is located on the front right-hand side of the machine. Turning the knob clockwise will cause the belt to track to the right (towards the disc sander mechanism). Turning the knob counter-clockwise will cause the belt to track to the left side of the machine.

### To properly track the sanding belt:

1. Plug in the sander.
2. Turn power switch ON, then immediately OFF, noting whether the belt tends to slide off its track, and to which side (front or back) of the sander.
3. If the sanding disc did not tend to either side, it is tracking properly.
4. If the sanding belt moves toward the disc (the front side of the sander), turn the tracking knob clockwise  $\frac{1}{4}$  turn.
5. If the sanding belt moves away from the disc (towards the back side of the sander), turn the tracking knob counter clockwise  $\frac{1}{4}$  turn.
6. Turn power switch ON, then immediately OFF again, again taking note of any belt movement.
7. Readjust tracking knob another  $\frac{1}{4}$  turn, as necessary.



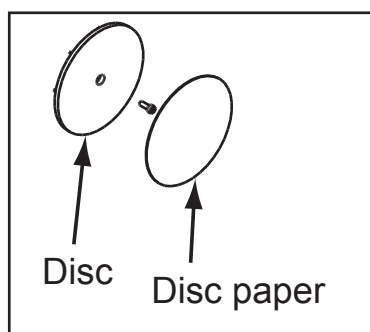
### Installing or Changing Accessories – Sanding Discs

**WARNING!** Turn the power off and remove the plug from the outlet before changing the accessories.

**Note:** Hook & Loop sanding discs cannot be used with this type of sander!

#### Removal:

1. Remove and set aside mitre gauge.
2. Completely remove the disc-sanding table.  
Sanding discs are adhered to the plate using a "pressure-sensitive adhesive". Remove sanding disc from disc plate.



### **Installation**

1. Ensure disc-plate is clean.
2. Peel backing from new sanding disc.
3. Press new sanding disc firmly onto disc-plate.

**Note: Hook & Loop sanding discs cannot be used with this type of sander!**

Replace the sanding table and handles that were removed in step 2 (above).

### **Dust Chute/Port – Operation**

Sanding operations are inherently dusty. To help minimize the amount of dust that escapes into the surrounding air, this Tooline sander is equipped with a 2 1/4" (57 mm) dust chute (aka: port) that can be easily connected to a dust-collection system. It is strongly recommended that users employ a dust-collection system when using this belt & disc sander.

Use of a mask or respirator is still recommended even when a dust-collection system is in use.

## **Operating Instructions**

### **Safety - Locking ON/OFF Switch**

The rocker ON/OFF power switch is located on the front of the sander, and incorporates a removable safety switch.

1. Press the side marked ON to turn the sander on.
2. Press the side marked OFF to turn the sander off.

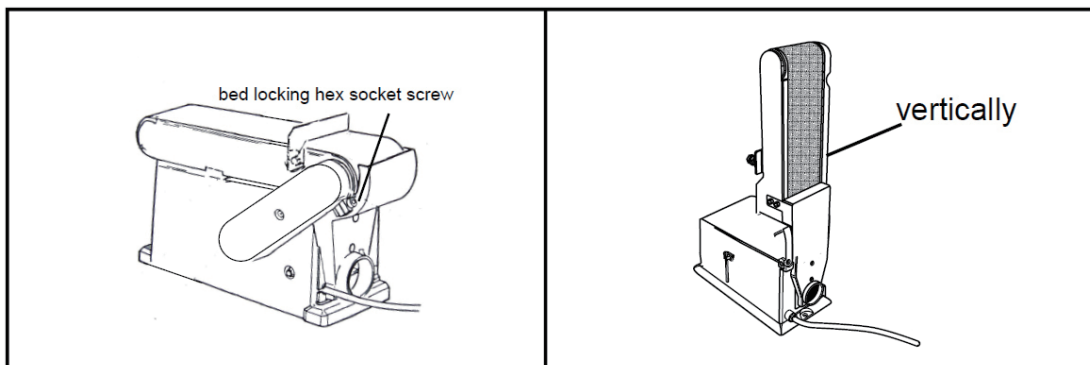
In situations where the sander may be left unattended, the operator has the option of removing the “yellow” safety portion of the ON/OFF switch to render the sander inoperable. When the operator is ready to use the machine again, the “yellow” safety portion of the switch may be reinstalled simply by inserting it into the opening in the switch and pushing it in until it “seats”.

### **Operating Instructions – Belt Sander – Horizontal and Vertical Sanding**

Your Tooline belt & disc sander – belt station can sand vertically as well as horizontally. Depending on operator needs and the workpiece, the work-support can be used with either the horizontal or vertical position.

To change from one position to the other:

1. Locate the 15/64” (6 mm) hex wrench
2. Loosen the bed-locking hex-socket screw by turning it counter-clockwise.
3. Manually move the work support station into the vertical or horizontal position, as required.
4. Retighten the bed-locking hex-socket screw by turning it clockwise (using the 15/64” (6 mm) hex wrench).



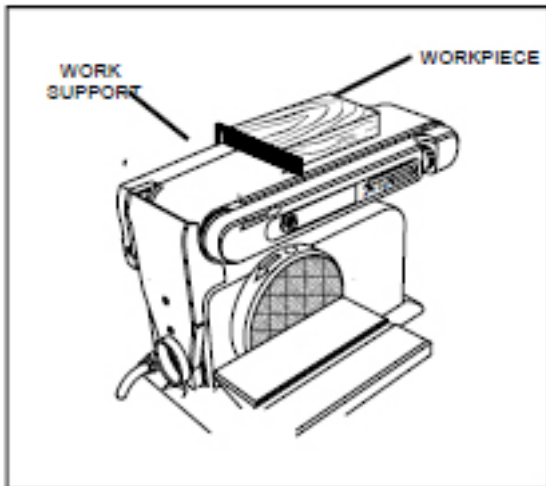
Operational Note: Sand long workpieces with the sanding belt in the vertical position by moving the work evenly across the sanding belt.

### Surface Sanding on the Sanding Belt

When sanding flat, broad surfaces on the belt sander, hold the workpiece firmly but lightly onto the surface of the belt and against the work support (work rest), keeping fingers away from the sanding belt. Consider using a push or hold-down stick.

Note: Use extra caution when sanding very thin pieces, and when sanding extra long pieces, remove the work support.

**Apply only enough pressure to allow the sanding belt to remove material.**

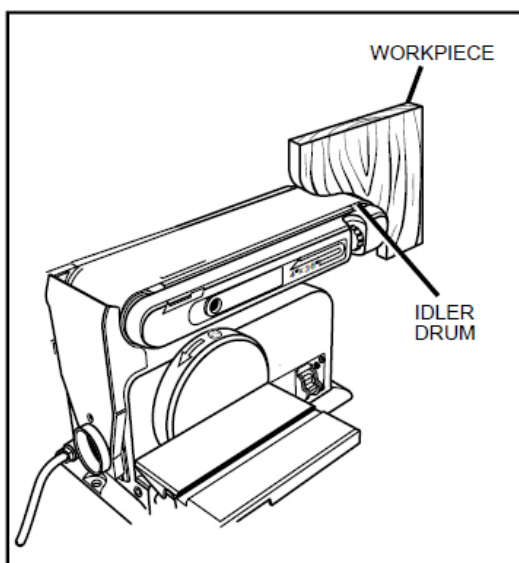


### Sanding Curved Pieces

When sanding inside-curves on the belt-sander, always sand on the idler drum end of the work-support station (right side of the machine as shown in diagram).

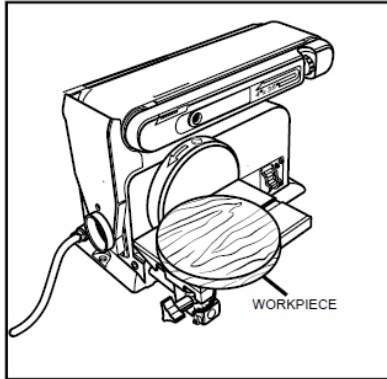
Hold the workpiece firmly, keeping fingers away from the sanding belt. Keep the curve pressed firmly against the idler drum, moving the work evenly back and forth across the drum.

Note: Use extra caution when sanding very thin pieces, and apply only enough pressure to allow the sanding belt to remove the material.



### **Sanding Disc Station - Sanding Outside Curves**

Always sand outside curves using the sanding disc and moving the workpiece from the left side of centre, as shown. Keep the curve pressed firmly against the sanding disc, moving the work evenly from the left side of the sanding disc. Be sure to hold the workpiece firmly onto the surface of the sanding-disc table.



### **Mitre Gauge – Disc Sander**

A mitre-gauge is supplied with your sander, and can be used on the disc table, as shown. The mitre gauge head can be set anywhere up to 60° (right or left) by loosening the lock-knob, setting the mitre gauge head to the desired angle, and retightening the lock-knob.

### **Sanding Small End Grain and other small surfaces using the Mitre Gauge**

Use of the mitre gauge is recommended for sanding small end surfaces on the sanding disc. Note: Always move the workpiece across the sanding disc from the left side towards the right side, and be sure to hold the workpiece down tightly onto the table surface.



## Maintenance

**WARNING!** Turn the power switch “OFF” and disconnect the plug from the outlet prior to adjusting or maintaining the sander. **DO NOT** attempt to repair or maintain the electrical components of the motor. Take the sander to a qualified service technician for this type of maintenance.

### Maintenance Required

- | Maintenance Required  | Frequency        |
|---|------------------|
| 1. Check power cord   | Before each use. |
| 2. Check sanding belts and discs for damage   | Before each use. |
| 3. Check moving parts for alignment and binding issues  | Before each use. |
| 4. Dress sanding surfaces   | As needed        |
| 5. Replace sanding belts or discs (see manual section for specifics)                          | As needed.       |
| 6. Clean and vacuum dust from the motor housing and other sander parts                        | As needed.       |
| 7. Ball Bearings in this tool are lubricated and sealed. They require no further lubrication. |                  |

**Service beyond recommended maintenance on these tools should only be performed by an authorized, qualified technician.**

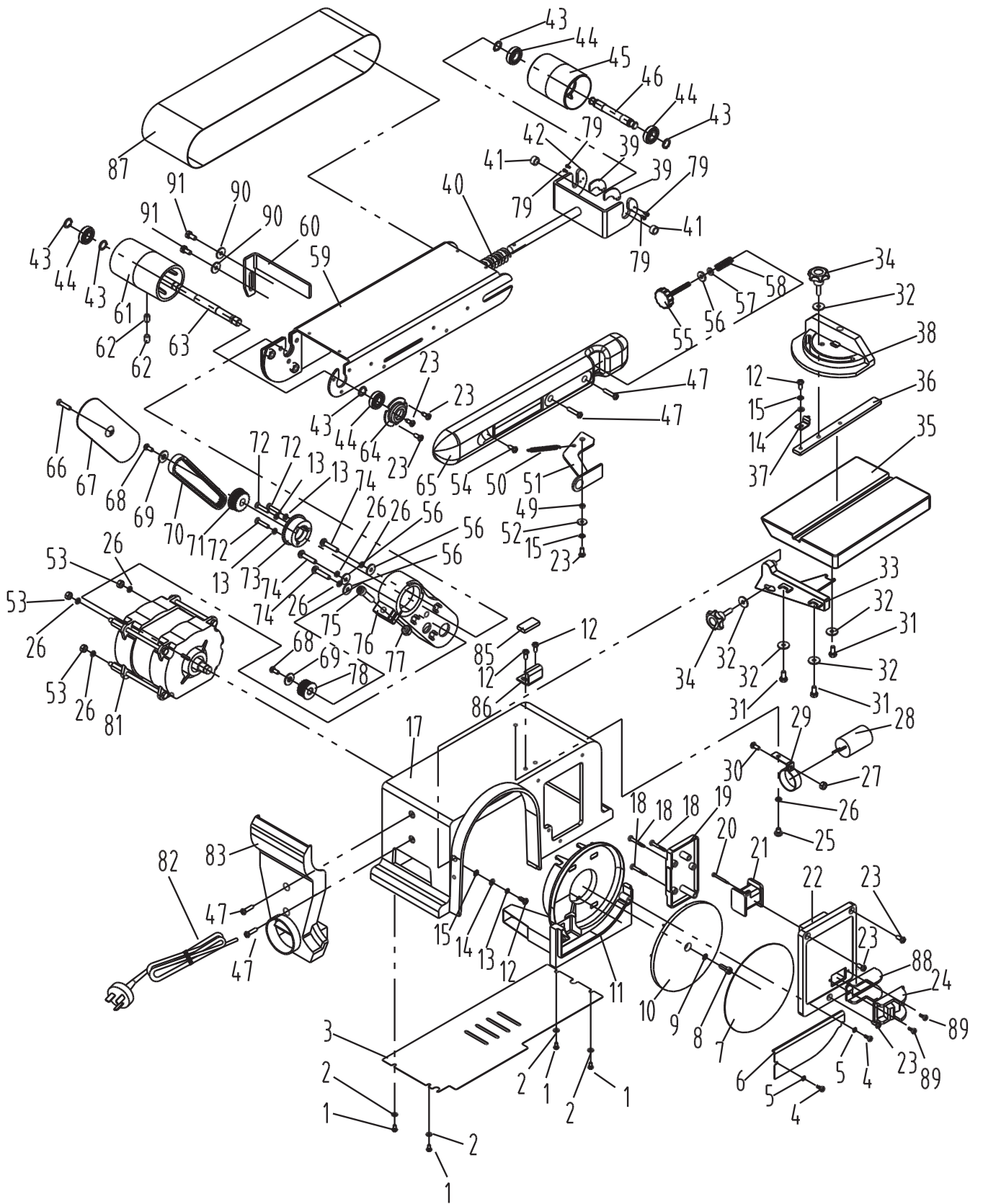
## Troubleshooting

Service on these tools should only be performed by an authorized, qualified technician.

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Sanding Grains easily rub off belt or discs.	<ol style="list-style-type: none"> <li>1. Sanding belt/disc has been stored in an incorrect environment.</li> <li>2. Sanding belt/disc has been damaged or folded.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ensure sanding accessories are stored away from extremely hot or dry temperatures.</li> <li>2. Store sanding accessories flat – not bent or folded.</li> </ol>
Deep sanding grooves or scars in workpiece.	<ol style="list-style-type: none"> <li>1. Sanding belt/disc grit is too coarse for the desired finish.</li> <li>2. Workpiece sanded across the grain.</li> <li>3. Too much sanding force on the workpiece.</li> <li>4. Workpiece held still against the belt-disc for too long.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a finer-grit sanding accessory.</li> <li>2. Sand with the grain of the wood.</li> <li>3. Reduce pressure on workpiece while sanding.</li> <li>4. Keep workpiece moving while sanding on the sanding accessory.</li> </ol>
Sanding surface clogs quickly.	<ol style="list-style-type: none"> <li>1. Too much pressure against belt/disc.</li> <li>2. Sanding softwood.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce pressure on workpiece while sanding.</li> <li>2. Use different stock, different sanding accessories, or accept that this will happen and plan on cleaning or replacing belts/discs frequently.</li> </ol>
Burns on workpiece.	<ol style="list-style-type: none"> <li>1. Using a sanding grit that is too fine.</li> <li>2. Using too much pressure.</li> <li>3. Work held still for too long.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a coarser-grit sanding accessory.</li> <li>2. Reduce pressure on workpiece while sanding.</li> <li>3. Do not keep workpiece in one place for too long.</li> </ol>
Motor will not start.	<ol style="list-style-type: none"> <li>4. Low voltage.</li> <li>5. Open circuit in motor or loose connections.</li> <li>6. Blown fuse or breaker.</li> </ol>	<ol style="list-style-type: none"> <li>4. Check power source for proper voltage.</li> <li>5. Inspect all lead connections on motor for loose or open connections. <b>(Send for Servicing)</b></li> <li>6. Short circuit. <b>(Send for Servicing.)</b></li> <li>7. Improper match between tool and circuit, fuse or breaker.</li> </ol>
Motor will not start – fuses or circuit breakers tripping or blowing.	<ol style="list-style-type: none"> <li>1. Short circuit in line, cord or plug.</li> <li>2. Short circuit in motor or loose connections.</li> <li>3. Incorrect fuses or circuit breakers in power line.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect cord or plug for damaged insulation and shorted wires.</li> <li>2. Inspect all connections on motor for loose or shorted terminals and/or worn insulation.</li> <li>3. Install correct fuses or circuit breakers or switch tool to an appropriately sized circuit.</li> </ol>

Motor overheats.	<ol style="list-style-type: none"> <li>1. Motor overloaded.</li> <li>2. Extension cord too long and of insufficient gauge (weight).</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce load on motor (pressure on object being sanded).</li> <li>2. Utilize an extension cord of appropriate gauge and length or plug tool directly into outlet.</li> </ol>
Motor stalls (resulting in blown fuses or tripped circuit).	<ol style="list-style-type: none"> <li>1. Short circuit in motor or loose connections.</li> <li>2. Low voltage.</li> <li>3. Incorrect fuses or circuit breakers in power line.</li> <li>4. Motor overload.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect connections on motor for loose or shorted terminals or worn insulations. <b>(Send for Servicing.)</b></li> <li>2. Correct low voltage conditions (for example: improper extension cord length and/or gauge).</li> <li>3. Install <b>CORRECT</b> fuses or circuit breakers or plug tool into an appropriate circuit, matched to an appropriate fuse or breaker.</li> <li>4. Reduce the load on the motor.</li> </ol>
Machine slows when operating.	<ol style="list-style-type: none"> <li>1. Feed rate too great.</li> <li>2. Undersized circuit or use of undersized extension cord.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the rate at which the workpiece is fed into the working area of the tool.</li> <li>2. Ensure circuit wires or extension cords are proper gauge, or eliminate use of extension cords.</li> </ol>
Machine vibrates excessively.	<ol style="list-style-type: none"> <li>1. Incorrect motor mounting.</li> <li>2. Incorrect sanding-belt tension.</li> <li>3. Weak or broken tension spring.</li> <li>4. Idler roller is too loose.</li> <li>5. Broken/defective sanding accessories.</li> </ol>	<ol style="list-style-type: none"> <li>1. Have motor mountings inspected by service technician.</li> <li>2. Adjust tension adjustment knob. Follow belt-tensioning/tracking instructions in this manual.</li> <li>3. Have tension spring replaced by service technician.</li> <li>4. Have service technician adjust idler roller.</li> <li>5. Replace sanding belt/disc.</li> </ol>
Workpiece frequently gets pulled out of operator's hands.	<ol style="list-style-type: none"> <li>1. Not supporting the workpiece against the stop.</li> <li>2. Attempting to sand (unaided) a workpiece that is too small.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use the platen (backstop) or mitre gauge to support the workpiece.</li> <li>2. Use another hand tool or jig to grasp or hold the workpiece.</li> </ol>
Workpiece lifts up from the sanding disc/table.	<ol style="list-style-type: none"> <li>1. Sanding on the "up" side of the wheel.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sand on right side of sanding disc (as operator faces the disc).</li> </ol>

# Parts Schematic



## Parts List

Item Number	Descriptions	QTY	Item Number	Descriptions	QTY
1	Phillips Screw M4X6	4	45	Idler Drum	1
2	Flat Washer D4	4	46	Idler Shaft	1
3	Base Cover	1	47	Phillips Screw M5X20	2
4	Phillips Screw ST4.2X10	2	49	Screw Bushing	1
5	Toothed Lock Washer D4	2	50	Draw Extend Spring I	1
6	Disc Cover	1	51	Belt Tension Knob	1
7	Disc Paper 80#	1	52	Big Flat Washer D5	1
8	Hex Socket Round Head Screw M6X16	1	53	Hex Nut, Type I M6	3
9	Toothed Lock Washer D6	2	54	Phillips Screw M5X16	1
10	Disc	1	55	Adjust Knob	1
11	Wheel Box	1	56	Flat Washer D6	4
12	Phillips Screw M5X8	4	57	Rubber Washer	1
13	Spring Washer D5	1	58	Adjust Spring	1
14	Flat Washer D5	1	59	Belt Support	1
15	Toothed Lock Washer D5	2	60	Work Rest	1
17	Base	1	61	Driving Pulley	1
18	Phillips Screw ST4.2X20	3	62	Hex Flat Lock Washer M8X12	2
19	Wire Connection Box Cover	1	63	Driving Pulley	1
20	Phillips Screw ST2.9X28	1	64	Bearing Cap	1
21	Relay	1	65	Support Cover	1
22	Wire Connection Box	1	66	Phillips Screw M5X10	1
23	Phillips Screw M5X10	7	67	Cog Belt Guard Cover	1
24	Electromagnetism Power Switch	1	68	Phillips Screw M5X16I	2
25	Phillips Screw M6X8	1	69	Special Locked Washer	2
26	Spring Washer D6	4	70	Cog Belt	1
27	Hex Nut, Type I M5	1	71	Driven Pulley	1
28	Capacitor	1	72	Phillips Screw M5X25	1
29	Capacitor Support	1	73	Bearing Base	1
30	Phillips Screw M5X12	1	74	Phillips Screw M6X25	1
31	Hex Bolt M6X12	3	75	Hex Socket Round Head Screw M8X25	1
32	Big Flat Washer D6	5	76	Cog Belt Guard Cover	1
33	Work Table Support Angle Plate	1	77	Square Nut	1
34	Miter Gauge Knob	2	78	Driving Pulley	1
35	Work Table	1	79	Phillips Screw M4X6	4
36	Miter Gauge Bar	1	81	Motor Assy	1
37	Point of Miter Gauge	1	82	Cord & Plug	1
38	Miter Gauge of Work Table	1	83	Dust Collect	1
39	Pulley Guard Plate	2	85	Support cushion	1
40	Tension Spring	1	86	Belt frame support	1
41	Bushing	2	87	Belt 80#	1
42	Belt Tension Support	1	88	Switch protect cover	1
43	Spring Retaining Ring for Shaft D12	4	89	Phillips Screw	2
44	Bearing101Z	4	90	Flat Washer D8	2
			91	Hex Socket Round Head Screw M8X16	2

## Warranty

This product is guaranteed for 1 year from the date of original retail purchase (Proof of purchase required) against defects in materials or workmanship subject to the following exclusions:

a) Any part that has become inoperative due to abuse, misuse, lack of proper maintenance as outlined in the Owners Manual, professional or accidental damage.

b) Normal wear and tear of parts, such as (but not limited to) spark plugs, air filters, starter cords, carbon brushes, etc.

c) Routine maintenance and consumable items, such as fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, etc., tune-ups or adjustments.

d) Where damage is caused by repairs made or attempted by others (persons not authorized by the manufacturer [or retailer]).

Exclusively at our option, we will repair or replace warrantable products at no charge to the original owner.

### Additional Limitations

Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, whether direct, incidental, consequential or exemplary, arising in connection with the sale or use or inability to use this product.

This guarantee applies only to the original owner, and may not be transferred.

### Notice to Consumer

The provisions contained in this written guarantee are not intended to limit, modify take away from, disclaim or exclude any warranties set forth in, or the operation of any applicable legislation.