BENCH GRINDER WITH MULTITOOL LINISHER

TSBL05

www.thetoolshed.co.nz

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Thank You

For the purchase of this ToolShed product. We try our hardest to supply customers like you with the best quality products available, at the best price possible. We cant wait to continue working together in the future.

Please contact us for any servicing, replacement parts, or questions you might have about your ToolShed product by visiting our website, or calling: 0800 948 665.

PRODUCT DETAILS

Product Model	*ToolShed Bench Grinder with Multitool Linisher*
Product Code	*TSBL05*

DISTRIBUTED BY:

Note:

This manual is for your reference only. Due to the continuous improvement of the ToolShed products, changes may be made at any time without obligation or notice.

Warranty:

This product may be covered under The ToolShed warranty. For more information, see our Terms & Conditions at www.thetoolshed.co.nz

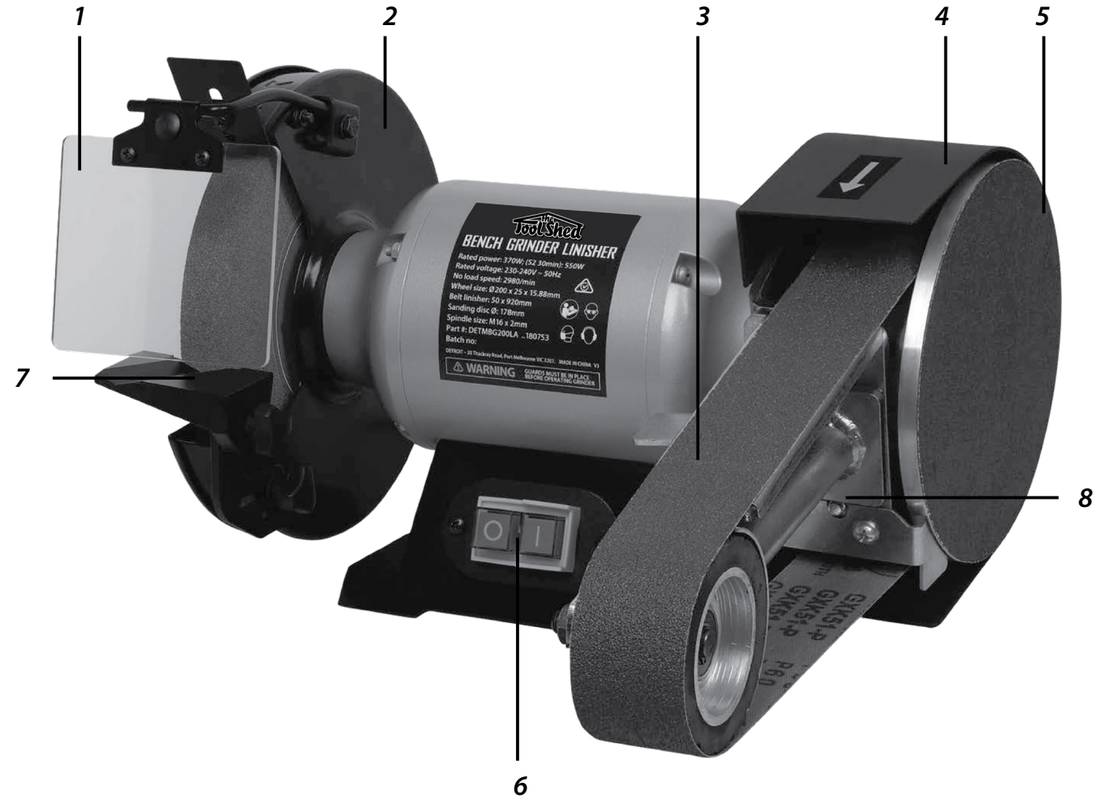
SPECIFICATIONS

Style	Bench top
Rated Power	370 – 550 Watts
Rated Voltage	230 Volts | 50 Hertz
No Load Speed	2980 RPM
Spindle Size	M16 × 2mm
Stone Grade	60 Grit
Wheel Size	200 x 25 x 15.88mm
Belt Linisher	50 x 920mm

Intended Use

The Bench Grinder and Multitool Linisher is ideal for use in sharpening chisels, axes and other wood-cutting tools, as well as repairing tips on screwdrivers and drill bits or for removing excess metal burrs from pieces of cut metal. The linishing belt/sanding wheel is ideal for finishing and deburring metal.

PRODUCT IDENTIFICATION



1. Safety Eye Shield
2. Wheel Guard Cover
3. Belt Sandpaper
4. Sandpaper Guard Cover
5. Sandpaper Disc
6. On/Off Buttons
7. Grinder Tool Rest
8. Belt Frame Adjustment Lever (Not Shown)

SAFETY GUIDELINES

WARNING

READ ALL SAFETY WARNINGS & INSTRUCTIONS. Failure to follow instructions and warnings could lead to serious injury, electric shock, or fire.

Work Area Safety

- **Ensure that your work area is kept clean and well lit.** Lack of visibility and clutter greatly increase the risk of accident when using tools.
- **Keep bystanders, pets, and children clear when operating this power tool or machine.** They can cause distraction or risk injury to themselves.
- **Ensure you are not operating the power tool or machinery in the presence of dust, liquids, flammable gases, or anything that can create an explosive atmosphere.** Power tools and machinery can create sparks which can lead to ignition and fire hazards in working environments.

Personal Safety

- **Always wear personal protective equipment (PPE).** Eye protection, ear protection, dust masks, and other protective equipment will help to reduce the risk of personal injury or long-term illnesses.
- **Dress appropriately. DO NOT wear loose clothing that can get caught in moving parts.** Keep hair, loose clothing, jewellery, and anything else that could be of risk, away from moving parts in the machine, or they could become caught therein.
- **Always remain alert and DO NOT operate power tools or machinery under the influence of any substances such as alcohol or drugs, including prescription medications.** Lack of focus could lead to injury or accidents while operating these power tools and machinery.
- **Always ensure proper footing and balance.** Overreaching can lead to slipping and falling which can result in injury or accident.
- **Ensure the power switch is in the OFF position before connecting any battery, or power source to the power tool or machinery.** This can cause injury as tools and machinery can suddenly fire incidentally when live, causing accidents.
- **Use all provided dust collection and extraction attachments, if included.** This equipment, along with the use of PPE dust masks, can help keep you safe from dust, and keep your work site clear from hazards.
- **Ensure loose parts such as wrenches or adjusting keys are removed before starting the power tool or machinery.**

SAFETY GUIDELINES

Electrical Safety

- **DO NOT use the power tool or machinery in rainy conditions or wet areas where the power tool or machinery could get wet.** Water in this power tool or machinery can lead to electric shock.
- **Only use the power tool or machinery when the plug correctly matches the power outlet.** Modifying plugs greatly increases the risk of electric shock.
- **Keep the power cord away from anything that could damage it such as sharp edges, moving parts or heat.** A damaged power cord increases the risk of electric shock.
- **Only operate outdoors with the use of an outdoor extension lead.** Not all extension leads are suited to outdoor use and using one which is not can greatly increase the risk of electric shock.
- **Avoid body contact with grounded or earthed surfaces.** Surfaces such as radiators, ranges, pipes, and refrigerators can increase the risk of electric shock due to your body being earthed or grounded.
- **Never carry the power tool by the cord, or yank the cable from the power outlet.** This can damage the internal wiring and may become a hazard.

WARNING

Electric shock can cause serious injury or, in some cases be fatal.

Power Tool & Machinery Use & Care

- **Use the correct tool for the job.** Forcing a tool to do a job it was not designed for increases the risk of accident or injury.
- **Disconnect tools and machinery from power, or remove batteries before doing any maintenance or adjustments, or before storing the tools and machinery.** This reduces or removes the risk of a power connection that causes the tool or machinery to accidentally fire, which can help prevent injury or accident.
- **Check the general condition of the power tool for damage or any problems that could affect the way the tool or machine works.** An unrepaired tool or machine can lead to accident and injury. Only have your tool or machine repaired with genuine parts from The ToolShed.
- **Only use the power tool and machinery with genuine parts or accessories that are designed to be used with this power tool and machinery.** Failure to do so could result in accident or injury, or damage your tool or machinery.
- **Store your tool or machinery out of reach of children, and away from untrained personnel when not in use.** Use by somebody untrained, or a child, could lead to accident or serious injury.

SAFETY GUIDELINES

Service

- **Have your tools and machinery serviced at The ToolShed with ToolShed replacement parts.** This will ensure that the safety of the power tool or machine is maintained.

WARNING

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Always Use Common Sense

- It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. If you get into a situation where you feel unsafe, stop and seek expert advise. Contact your dealer, service agent, or an experienced user. Do not attempt any task you feel unsure of!
- **Do not let familiarity gained from the frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

Bench Grinder Specific Safety

- Always use tool guards and eyes shields provided with the grinder, safety goggles, or other eye protection. Keep your thumbs and fingers away from the wheel.
- Replace a cracked grinding wheel immediately. A cracked wheel can throw pieces at high velocity. Handle wheels carefully; before replacing a wheel, check it for cracks.
- Tighten the spindle nut just enough to hold the wheel firmly: if the nut is tightened too much, the clamping strain can damage the wheel. Use only wheel flanges provided with the grinder.
- As the diameter of the grinding wheel decreases with use, adjust work rests to maintain a distance no greater than 2mm. Also keep the distance between the spark arrestor and grinding wheel 3mm or less.
- Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no load speed for one minute. Replace the wheel once these distances cannot be maintained. Damaged accessories will normally break apart during this test time.
- The exhaust chute will channel out sparks and debris. Be sure the exhaust is not in the vicinity of flammable material. Frequently clean grinding dust from the back of the grinder.
- Avoid fire. Clean out all sawdust and disconnect from any vacuum before sanding metals

SAFETY GUIDELINES

- Never force work against a grinding wheel, especially if the wheel is cold. Apply the work gradually to give the wheel an opportunity to warm. This will minimise the chance of wheel breakage.
- Never grind on the sides of a grinding wheel. Grinding on the side can cause the wheel to break and fly apart.
- Keep all wheel guards in place. Ensure the guard, work rest, eye shield and spark arrestor are in place when tool is in use. Do not use tool without these accessories. Do not try to cut anything with the grinding wheel.
- Always use a wheel dresser to resurface the grinding wheel.
- Always use this tool with the accessories attached on both ends to reduce the risk of making contact with a rotating spindle.
- The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.
- Use extra caution with large, very small or awkward workpieces.
- Avoid burns. Grinding may cause items and the grinding wheel to become hot. Do not touch the grinding wheel or items that may be hot.
- When fitting a new grinding wheel, always check that the stated maximum RPM meets or exceeds that stated on the grinder sander. Ensure the wheel diameter and arbour size meet that stated on the specifications. Also check the new wheel for damage, such as flaws or cracks.
- Do not use sanding belt larger than needed.
- Make sure the sanding belt is installed in the correct direction.
- Change the sanding belt frequently to maintain the product's ability to effectively remove material.
- Do not use a sanding belt which is damaged, torn, or loose. Use only a sanding belt of the correct size.
- Do not force the product. Use the correct product for your application. The correct product will do the job better and safer at the rate for which it was designed.

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- ***Lead from lead-based paint,***
- ***Crystalline silica from bricks, cement, and other masonry products, and,***
- ***Arsenic and chromium from chemically-treated lumber.***

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

ASSEMBLY

Mounting to the Workbench

WARNING

Ensure the unit is disconnected from the power source before making any adjustments or performing any maintenance.

Before attempting to use this grinder, it must be properly mounted to a workbench or grinding stand.

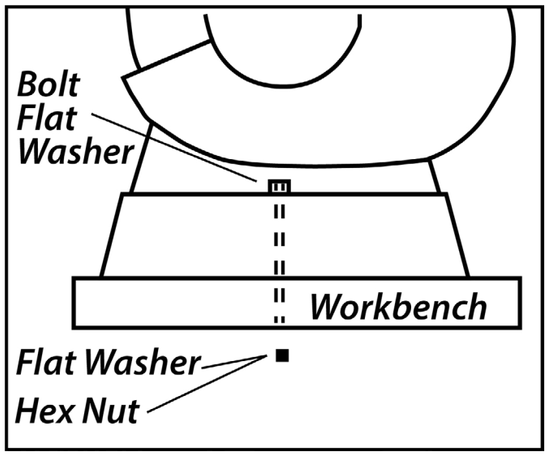
When transporting or moving the bench grinder ensure you lift the unit by the base.

1. Position the grinder on the workbench.

2. Mark the workbench through the two mounting holes located in the grinder base.

3. Drill holes in the workbench at the marks.

4. Using two long bolts, washers, lock-washers and nuts, as shown below (not supplied), secure the grinder to the workbench.



CAUTION

Bench grinders vibrate. Grinder movement during high-speed rotation may cause injury or damage to the workpiece or operator. Mount the grinder securely to a sturdy workbench or grinding stand.

Eye Shield Installation

- Eye shields must be installed before operating the bench grinder.

1. Mount the left and right shield rods to the inside of the wheel guards using hex bolts.

2. Once shield rods are firmly in place, slide the shield bracket onto the shield rod.

3. Tighten the carriage bolt, leaving it loose enough to allow the safety shield to be raised and lowered easily

NOTE: The eye shield should move freely when being adjusted, but stay in place when the locking knob is tightened.

Installing/Changing the Wheel

1. Use a screwdriver to loosen the wheel cover screws and push counter-clockwise to remove the wheel cover.

2. Fit the correct wrench on the spindle hex nut.

3. Loosen the wheel nut in a clockwise direction for the left side and a counter-clockwise direction for the right side.

4. Remove the outer flange and grinding wheel. To remove the hex nut, turn the wrench and nut until the wrench is resting on the workbench behind the tool.

ASSEMBLY

5. Inspect the new wheel carefully to ensure there are no cracks, chips or other damage.

6. Wipe the flange surfaces clean, and install the new wheel, flange and the spindle hex nut.

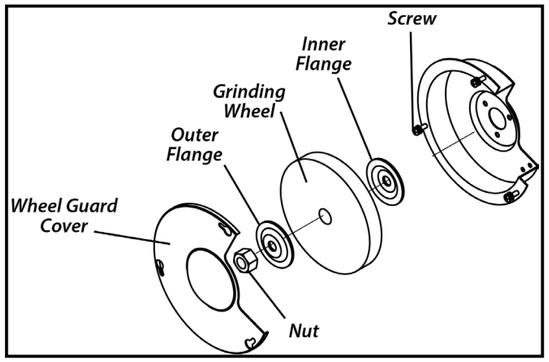
7. To install a new grinding wheel, reverse the above procedure.

8. Be sure the grinding wheel and outer flange are properly seated on the spindle shaft.

9. Replace the wheel cover and reposition the tool rest.

10. When turning the grinder on with a newly installed wheel, DO NOT STAND IN FRONT OF THE GRINDER. Stand to the side and allow the grinder to run for at least one minute before proceeding to use it.

11. Ensure both spindles are mounted with an accessory to prevent contact with the rotating spindle.



WARNING

Do not over-tighten the spindle hex nut, because this may cause the wheel to crack.

CAUTION

DO NOT INSTALL OR USE A DAMAGED GRINDING WHEEL. The force of rotation may cause a damaged wheel to fly apart, and could injure operators or bystanders.

Tool Rest Installation

1. Using the hex bolt and washer, secure the work rest against the inside of the wheel guard.

2. Before tightening the bolts, adjust the gap between the grinding wheel and the work rest to a maximum of 16mm (1/16”). Tighten securely.

Tool Rest Adjustments

- To prevent the workpiece from being pulled and caught between the tool rest and the wheel, re-adjust the tool rest position whenever necessary to maintain the 3.2mm distance.

1. Loosen, but do not remove, the knob holding the tool rest arm.

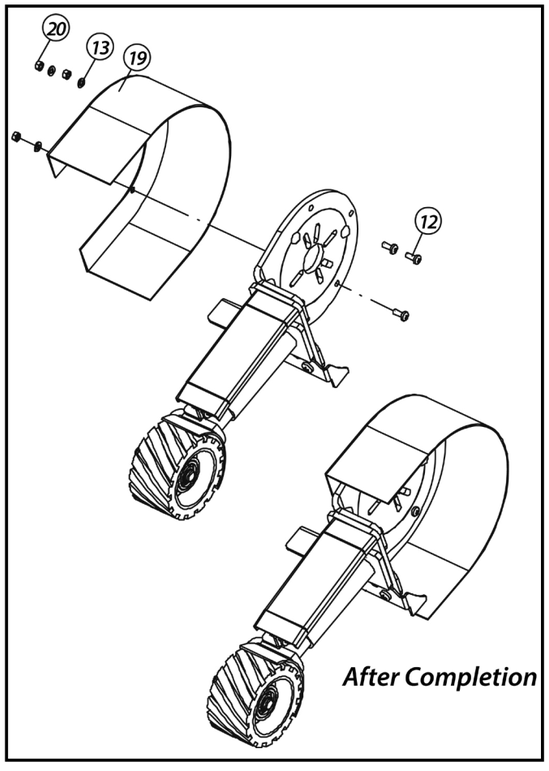
2. Slide the tool rest in or out to achieve a 3.2mm distance from the grinding wheel surface.

3. Re-tighten the lock knob.

ASSEMBLY

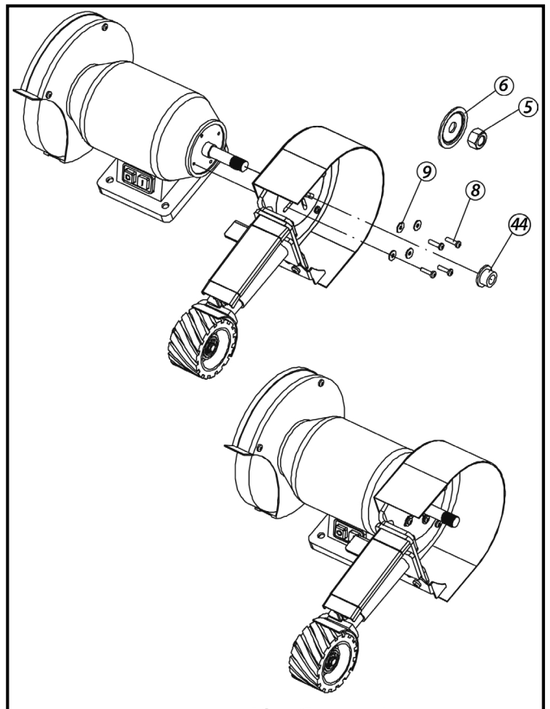
Assembling the Protective Cover

1. Ensure the unit is disconnected from the power source before making any adjustments or performing any maintenance.
2. Assemble the protective cover as shown in the below figure and tighten the screws #12.



Installing the Sanding Belt Frame

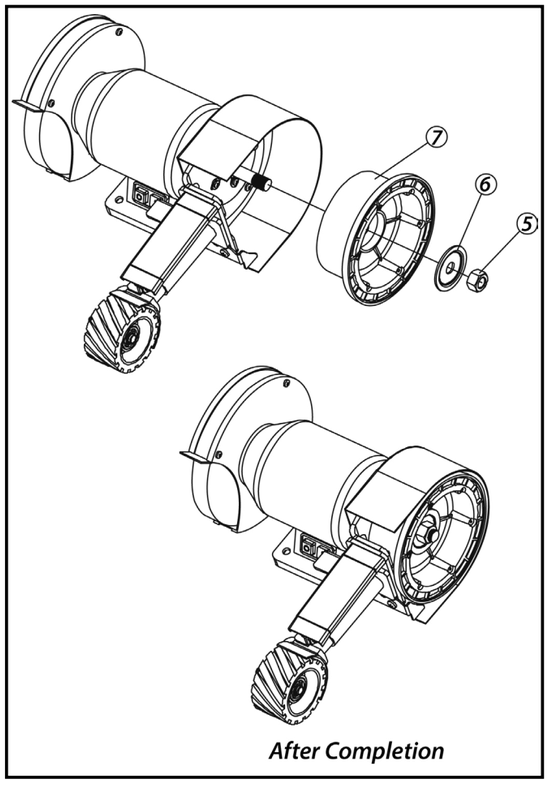
1. Remove the right grinding wheel and guard, and keep the nut #5 and grinding wheel flange #6 for future use.
2. Install the sanding belt frame onto the motor shaft with flat washer #9 and bolt #8 and tighten them. Apply shaft bushing #44 if necessary.



ASSEMBLY

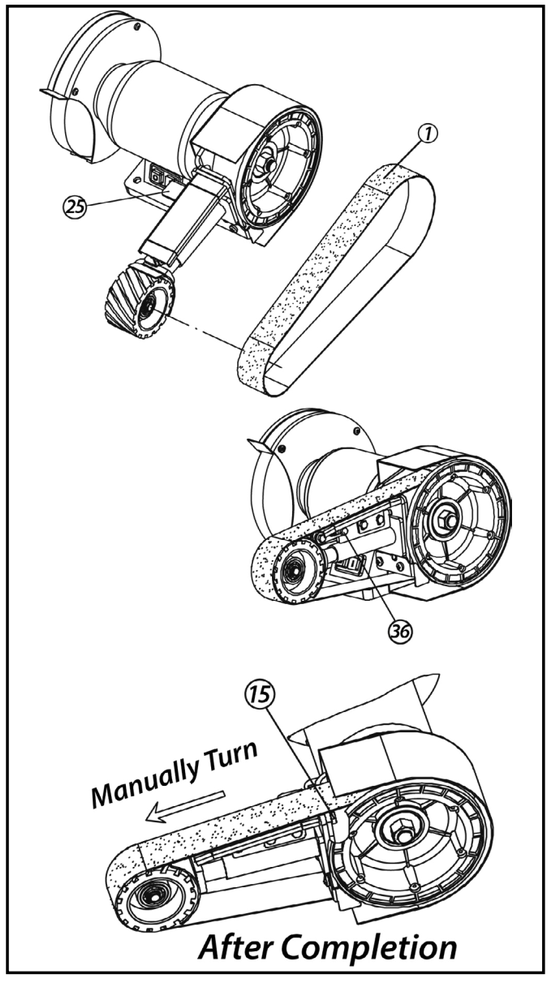
Installing the Aluminium Driving Wheel

1. Install the aluminium driving wheel #7 into the wheel shaft of the grinder (apply shaft bushing if necessary), install the grinding wheel flange #6 and tighten the nut #5.



Installing the Sanding Belt

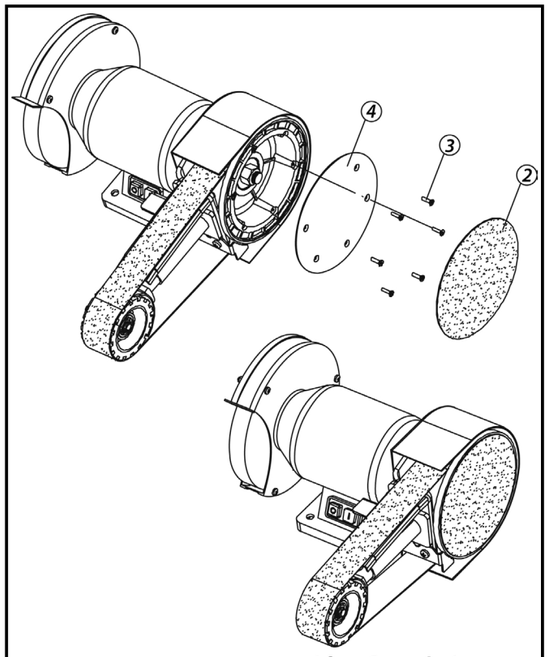
1. Press front driven wheel, the tension lock board will drop and fix the driven wheel support.
2. Install the sanding belt, lift the tension lock board and tighten the sanding belt.
3. Turn the sanding belt with hand according to the arrow direction to check the running track.
4. Turn on the power, adjust the eccentric plate #25 to do fine adjustment to ideal position.



ASSEMBLY

Installing the Sanding Disc

1. Install the sanding disc #4 and tighten the screws #3.
2. Tear off the back paper and paste sanding paper to the disc, press the paper to stick it evenly and firmly.



After Completion

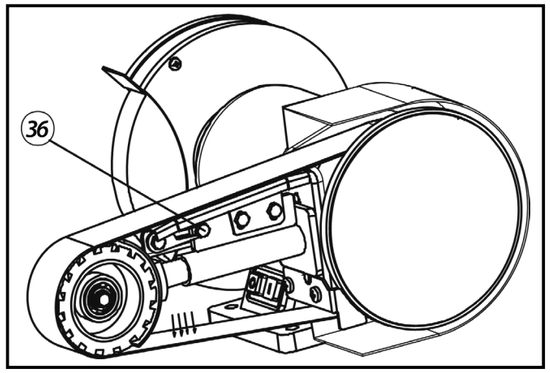
Replacing the Sanding Paper

1. Ensure the unit is disconnected from the power source.
2. Tear off the old sanding paper, clean the disc and paste the new paper according to the previous step.

Replacing the Sanding Belt

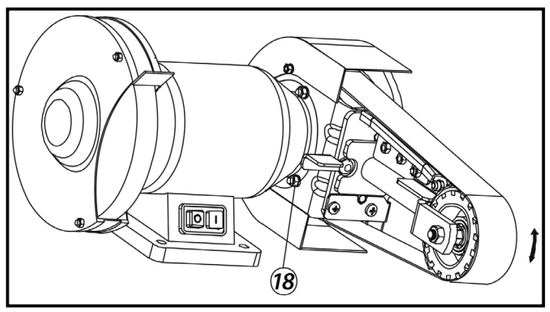
1. Ensure the unit is disconnected from the power source.
2. Loosen bolt #36 and press the front driven wheel, the tension lock board will drop and fix the driven wheel support. This makes it easy to remove the belt and install a new belt. Lift the tension lock board, and then tighten bolt #36.

NOTE: After replacement, do a trial run to check the belt tracking and adjust the eccentric plate to get the ideal position before working on a project.



Adjusting the Belt Frame Working Position

1. Loosen nut #18, adjust the frame up or down to desired angle, then refix nut #18.



OPERATION

Using the Bench Grinder

This ToolShed Bench Grinder and Multitool Linisher is ideal for use in sharpening chisels, axes and other wood-cutting tools. It is also useful for repairing tips on screwdrivers and drill bits or for removing excess metal burrs from pieces of cut metal. The linishing belt/sanding wheel is ideal for finishing and deburring metal.

Turning On & Off

- The rocker ON/OFF power switch is located on the front of the grinder.

1. Press the side of the button marked ON to turn the grinder on.
2. Press the side of the button marked OFF to turn the grinder off.

Grinding

- Adjust the tool rest to accommodate large or unusually shaped workpieces.
- Always keep the workpiece moving across the face of the grinding wheel. Grinding continuously on the same spot on the wheel will cause grooves to be worn into the wheel. The wheel may crack or become damaged more easily, and grinding of other objects will be difficult.
- If the workpiece becomes hot, dip it in water or oil to cool it.
- Always grind on the face of the wheel (around the diameter), NEVER on the sides. Side pressure on grinding wheels can cause cracking and damage.
- If the face of the grinding wheel is worn unevenly, becomes grooved, or is no longer smooth and flat, the wheel should be reshaped with a dressing tool (not supplied).
- If the diameter of the grinding wheel is no longer round, the wheel should be reshaped with a dressing tool or replaced.
- If the surface of the wheel becomes loaded and dull with workpiece material, the wheel should be cleaned with a dressing tool.
- After reshaping, always re-adjust the tool rests and spark arrestors.
- Adjust the work rest accordingly. Ensure the angle between the work rest and the tangent of the accessory is always greater than 85°.

MAINTENANCE

- Before cleaning or performing any maintenance, you must ensure the tool is switched off and disconnected from the power supply.
- Compressed air is the most effective way to clean this tool. Always wear PPE safety goggles when cleaning tools with compressed air.
- Ventilation openings and switch levers must be kept clean. DO NOT attempt to clean by inserting pointed objects through openings.
- Do not use harsh chemicals or solvents when cleaning this tool.
- If you discover any damaged or broken parts, consult your nearest ToolShed for replacements and advise.

WARNING

Always be sure that the tool is switched off and unplugged before attempting to perform any inspection or maintenance.

Environment & Disposal

- Packaging materials are raw materials and can be re-used. Separate the different packaging materials and take them to the appropriate waste disposal facility. More information can be obtained from your local authorities.
- Old machines do not belong in your household garbage! Dispose of old machines appropriately, we are all responsible for the environment.

Transport & Storage

- When storing the product, disconnect the power cord.
- Clean the product using a brush and vacuum cleaner, or low pressure compressed air.
- Always carry and lift the product according to the instruction in this user manual.
- Protect the product from any heavy impact or strong vibrations which may occur during transportation in vehicles.
- Secure the product to prevent it from slipping or falling over.
- Store the product and its accessories in a dry, safe place which is not accessible to children.
- We recommend using the original package for storage to protect the product against dust.

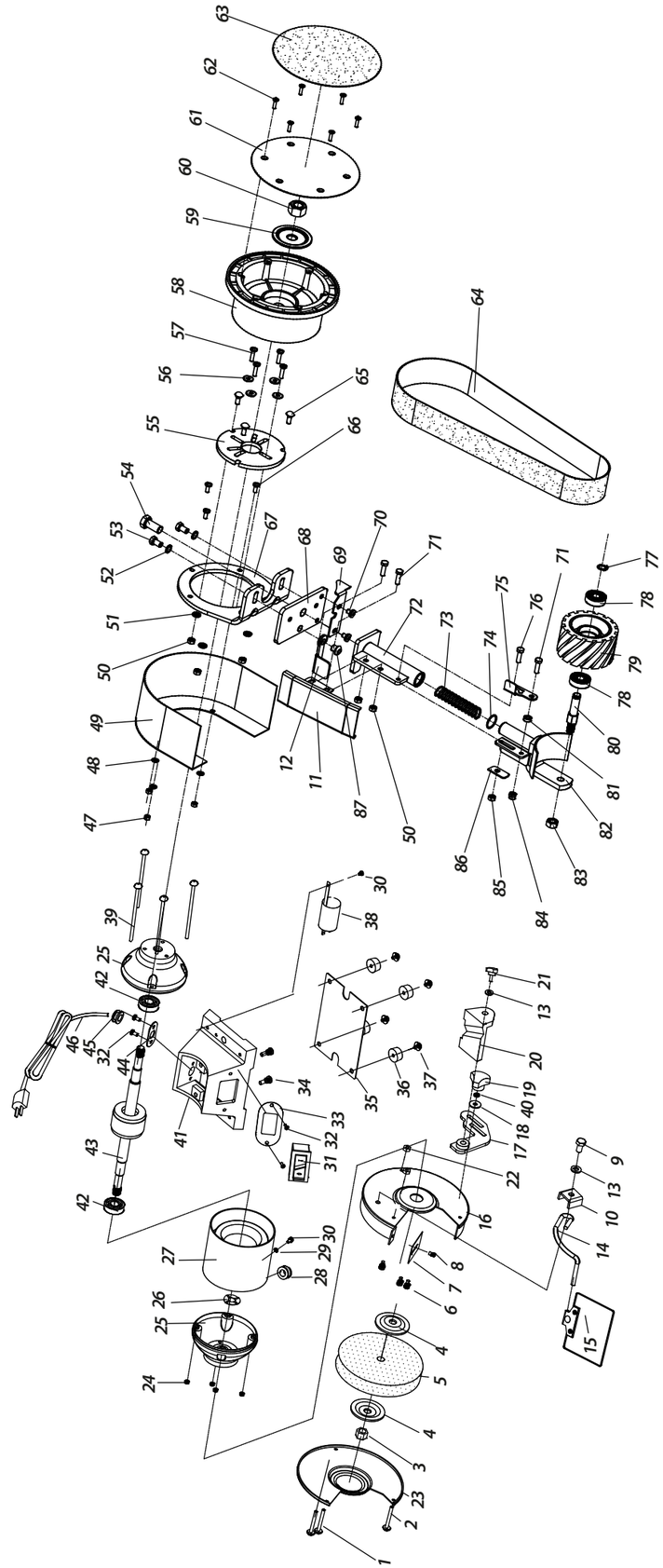
TROUBLESHOOTING

FAULT	*POSSIBLE CAUSE*	*SUGGESTED SOLUTION*
Motor will not start	Low voltage	Check power source for proper voltage.
	Open circuit in motor or loose connections	Inspect all lead connection on motor for loose or open connections.
	Blown fuse or breaker	Short circuit.
		Improper match between tool and circuit.
Motor will not start - fuses or circuit breakers tripping or blowing	Short circuit in line, cord, or plug	Inspect cord or plug for damaged insulation and shorted wires.
	Short circuit in motor or loose connections	Inspect all connections on motor for loose or shorted terminals and/or worn insulation.
	Incorrect fuses or circuit breakers in power line	Install correct fuses or circuit breakers or switch tool to an appropriately sized circuit.
Motor overheats.	Motor overloaded	Reduce load on motor.
	Extension cord too long and of insufficient gauge (weight)	Utilise an extension cord of appropriate gauge and length or plug tool directly into outlet.
Motor stalls resulting in blown fuses or tripped circuit.	Short circuit in motor or loose connections	Inspect connections on motor for loose or shorted terminals or worn insulation.
	Low voltage	Correct low voltage conditions e.g.: improper extension cord length and/or gauge.
	Incorrect fuses or circuit breakers in power line	Install correct fuses or circuit breakers or plug tool into an appropriate circuit, matched to an appropriate fuse breaker.
	Motor overload	Reduce the load on the motor.
Machine slows when operating	Feed rate too great	Reduce the rate at which the workpiece is fed into the working area of the tool (grinding wheel).

TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SUGGESTED SOLUTION
Wavy condition on surface of workpiece	Machine vibrating	Ensure machine is securely mounted on a solid surface.
	Workpiece not being held firmly	Use a holding device to firmly retain the workpiece.
	Wheel face uneven	Dress the grinding wheel.
	Wheel is too hard	Use softer wheel, or reduce the feed rate.
Lines on surface of workpiece	Impurity on surface of wheel	Dress the grinding wheel.
	Workpiece not being held tightly	Use a holding device to more firmly retain the workpiece.
Burning spots or cracks on the workpiece	Improper type of grinding wheel	Try wheels with a softer bond or coarser grit.
	Improper feed rate	Slow down the rate at which the workpiece is fed into the wheel.
	Coolant required	Introduce coolant.
Wheel dulls quickly, grit falls off	Feed rate is too aggressive	Decrease feed rate of workpiece into grinding wheel.
	Wheel is soft	Select a grinding wheel with a harder bond of material.
	Wheel diameter is too small	Replace the wheel.
	Bad wheel dressing	Dress the wheel.
	Defective wheel bonding	DO NOT USE — return wheel to place of purchase.
Wheel clogs and workpiece shows burn marks	Wheel is too hard	Select a grinding wheel with a softer bond of material.
	Feed rate is too slow	Increase the feed rate of the workpiece into the grinding wheel.
	Bad wheel dressing	Dress the wheel.
	Coolant required	Introduce coolant.

TSBL05 EXPLODED VIEW & PARTS LIST



1	Phillips Screw M5×48 X2	16	Left Inner Guard Cover	31	Switch	46	Power Cord	61	7in Disc	76	Hex Bolt M6×20
2	Hex Bolt M5×51	17	Left Fixed Work Rest	32	Phillips Screw M5×8 X4	47	M5 Hex Nut X3	62	Phillips Screw X4	77	D12 Retaining Ring
3	M16 Hex Nut	18	Big Washer D5	33	Switch Plate	48	D5 Washer X3	63	Disc Paper	78	Bearing 6201 X2
4	Chuck X2	19	Work Rest Locking Nut	34	Hex Bolt & Spring Assy M8×22 X2	49	Guard Cover	64	Belt Paper	79	Rubber Wheel
5	Grinding Wheel (36#)	20	Right Flexible Work Rest	35	Bulkhead	50	M6 Hex Nut X5	65	Bolt M6×12 X3	80	Slave Shaft
6	Screw & Spring Assy M5×10 X3	21	Work Rest Locking Handle	36	Rubber Foot X4	51	D6 Washer X3	66	Phillips Screw M5×16 X3	81	Spacer
7	Spark Deflector	22	M5 Hex Nut X2	37	Screw + Washer Assy M5×16 X4	52	D8 Big Washer X2	67	Fixing Bracket	82	Rubber Wheel Bracket
8	Screw & Spring Assy M5×10	23	Left Guard Cover	38	Capacitor	53	Hex Bolt M8×16 X2	68	Transition Plate	83	Hex Nut M10×1
9	Hex Bolt M6×14	24	M5 Hex Nut X4	39	Screw + Washer Assy M5×148 X4	54	Hex Bolt M12×20	69	Small Guard Support	84	M6 Locking Nut
10	Pressing Plate	25	End Cover X2	40	D5 Spring Pad	55	Flange	70	Phillips Screw M6×8 X2	85	M6 Hex Nut
11	Plate	26	D40 Washer	41	Base	56	D5 Big Washer X3	71	Hex Bolt M6×16 X3	86	Small Plate
12	Eccentric Plate	27	Stator	42	Bearing X2	57	Phillips Screw M5×20 X3	72	Guide Sleeve Weld	87	Rivet
13	Washer D6 X2	28	Cord Sheath	43	Rotor 203	58	Driving Wheel	73	Spring	88	Plate
14	Left Eyeshield Support	29	Tooth Pad	44	Clasp Base Plate	59	Pressure Plate of Driving Wheel	74	O-Ring	89	Eccentric Plate
15	Eyeshield Assy	30	Screw, Pad, & Washer Assy M4×8 X2	45	6P4 Cord Clip	60	Nut M16	75	Small Lock Plate		