

LANDIS S500 OPERATOR MANUAL



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LANDIS S500 SANDER



INTRODUCTION

The S 500 Sander is a compact, durable machine designed for fast, complete finishing work. It will deliver efficient, dependable service when used correctly and with care. As with any piece of specialized equipment, for best performance the manufacturer's instructions must be followed.

SAFETY RULES



WARNING: For your own safety, read operating instructions manual before operating tool.

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from work area.
6. **MAKE WORKSHOP KID PROOF** with padlocks, master switches, or by removing starter keys.
7. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.
9. **DO NOT USE EXTENSION CORD.**
10. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewellery which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
11. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. **DON'T OVERREACH.** Keep proper footing and balance at all times.
14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. **DISCONNECT TOOLS** before servicing; when changing accessories, such as blades, bits, cutters, and the like.

16. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure the main switch is in off position before plugging in.
17. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.



WARNING: RISK OF INJURY

Disconnect tools before servicing and lock the switches.

Eye protection should always be worn by the operator and others in the work area when the sander is in use.

Eye protection is required for protection from flying debris and dust, which could cause eye injury.

Avoid kick back by sanding in accordance with the directional arrows.

Close sanding doors belt before operating the machine.

Close the main access door and fan cover before operating the machine.

INSTALLATION

The Landis S 500 SANDER should be located on a flat, firm surface, in an area free of obstructions that could interfere with the safe operation of the equipment. The Sander should be positioned and leveled to obtain quiet operation with a minimum of vibration.

ELECTRICAL CONNECTIONS

Electrical connection may be made by either plugging the provided electrical cord into an appropriately wired electrical socket, or by wiring the machine directly into an electrical disconnect box.

NOTE: Refer to the machinery identification plate to determine the electrical specifications of this machine in respect to voltage, phase and amperage requirements.



WARNING: IF THE ELECTRICAL CORD, PLUG OR WIRING SHOULD BECOME FRAYED OR DAMAGED, REPLACE IT AT ONCE. DO NOT ATTEMPT TO OPERATE THE MACHINE WITH FAULTY WIRING AS IT COULD RESULT IN SEVERE INJURY OR DEATH.

DO NOT START SANDER BEFORE CHECKING FOR PROPER SANDING BELT TRACKING.

ELECTRICAL CONTROL BOX

The electrical control box on back of the machine houses the motor controls on the Sander, except for the Naumkeag motor that runs on 115 volts (on option). The motor is thermally protected. In case of overload, the relay will trip and shut the motor off. The thermal overload on the motor must be reset after 30 min.

GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having 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 a qualified electrician.

Improper connection of the equipment/grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green 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 alive terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs, and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

DUST BAG RACK INSTALLATION

1. Unscrew the four bolts near the top of the machine



2. Insert the rack and align it to the holes for the bolts



3. Screw in the bolts



4. Stretch the five dust bags and button them around the pole on the rack



START-UP

Before shipment, your Landis Sander was checked at the factory for proper adjustment and operation. However, due to the possibility of jarring or damage during handling and shipping, it is necessary to check that the machine is in proper working order before use.



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BEFORE INITIAL START UP, TURN SANDING BELTS BY HAND TO ENSURE THAT ALL PARTS ARE FREE. DO NOT START SANDER BEFORE CHECKING FOR PROPER SANDING BELT TRACKING.

BEFORE CONNECTION TO AN ELECTRICAL POWER SUPPLY

1. Check that the switch is off.
2. Rotate the sanding belts to see that all parts are free and not binding. Continue for one complete rotation of the sanding belt, checking both belts for tears or other damage. You can tell that one complete revolution has been made when the joint of the sanding belt has gone by the front pulley twice.



WARNING: AS WITH ANY PIECE OF ELECTRICAL EQUIPMENT, THERE IS AN EVER PRESENT HAZARD OF ELECTRICAL SHOCK WHEN OPERATING OR TOUCHING THE SANDER. ENSURE THE MACHINE IS PROPERLY GROUNDED AT ALL TIMES.

DO NOT FORCE THE EQUIPMENT. IT WILL DO THE JOB BETTER AND SAFER AT THE RATE FOR WHICH IT WAS DESIGNED.

BEFORE STARTING THE SANDING BELT MOTOR

Check that both sanding belts are tracking properly, as follows:

1. “Jog” the sanding belt motor by quickly hitting the “start” and “stop” switch such that the belts turn slowly, then stop.
2. Continue jogging the motor and check each belt to see that it stays roughly centered on its forward pulley.
3. Tracking adjustment handles are located to the right of the sanding belts. Clockwise rotation of the adjustments moves the belt to the right and counter clockwise rotation moves the belt to the left. Adjust accordingly as required so that each belt is tracking properly while running slowly.



4. “Jog” sanding motor switch. Fine adjust the tracking of each belt at full speed.

SANDING BELT REPLACEMENT

Sanding belts can be obtained in various grit to suit your needs and are easily changed.



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WARNING: Do not start sander before checking for proper sanding belt tracking.

Do not operate machine with access door open.

Never leave machine running while unattended. Turn it off.

As individual sanding belts wear from use, it will become necessary to make minor tracking adjustments to keep sanding belts centered.

TO REPLACE 4" WIDE BELT:

1. Open the sanding belt door



2. Release pressure on the belt by pulling or pushing the handles



3. Reach in access door and remove the far end of the belt off the idler first



4. Remove build-up dust on the rubber sanding wheel and on the idler drum

5. To install the new sanding belt, reverse the procedure described above, then readjust the tracking as describes earlier in the "start up" section

MAINTENANCE

A properly maintained machine will give you years of satisfactory service, whereas an abused machine will not. We strongly recommend that you observe the following procedures for your own benefit and safety.



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DAILY AND WEEKLY MAINTENANCE

Clean your Landis Sander daily.

Shake dust bags and empty dust drawer daily.

1. After cleaning the machine, turn dust extraction motor off. While the motor is coasting to a stop, shake bag vigorously.
2. Open the front door. Open the dust drawer.



3. Remove the large dust tray, remove dust.
4. Check seal around drawer and replace if damaged or if it is not sealed properly.
5. Check the ring at the bottom of the dust bag. Make sure that the ring is well snapped into the round hole.
6. When the dust drawer is full, dust may spill when the drawer is removed. Vacuum out the bottom of the machine before replacing the drawer for the last time.

The cleaner you keep the dust bags, the less likely you are to burn a hole in them. Failure to shake the dust bags and empty the dust drawer daily will only increase this likelihood, but also cause a significant loss of dust extraction.

4" Felt or rubber sanding wheel:

- Clean the rubber surface to avoid accumulation of dust. If there is too much accumulation, the sanding belt won't stay on the felt or rubber wheel and you will have problems with tracking.

Idler wheel 4":

- Clean the flat surface to avoid accumulation of dust.



WARNING: Dust from sander is combustible. Do not smoke while cleaning the machine and dust collector.

Dust from sander is combustible. Do not sand metal as it can cause sparks which could ignite a fire.

Damaged dust bag or dust drawer seals will allow the escape of combustible materials causing a fire hazard around the machine.

Check damaged parts before further use of a tool, guard or other part that is damaged, check carefully to determine that it will operate properly and perform its intended function. Check for mounting of any other condition that may affect its operation. A tool, guard or other part that is harmfully damaged should be properly repaired or replaced.

If the electrical cord, plug or wiring should become frayed or damaged, replace it at once.

Replace all doors and guards before operating the machine.

Do not operate machine with sander housing doors open.

After making adjustments, remove all wrenches and other tools before operating the sander.

Use extra caution when starting the sander for the first time after installing a new tool or part.

MONTHLY MAINTENANCE

1. Check the sanding pulleys surface for any accumulation of dust. Clean if necessary. Replace the wheel if worn.

2. V-Belts – Check tension and adjust if necessary.

YEARLY MAINTENANCE

Once a year you should remove the dust bags for a thorough cleaning.

The dust bags are removed by:

1. From the back of the machine, unsnap the top of each bag.
2. Remove the dust bags by pushing on the ring at the bottom of each bag.
3. You can use a vacuum cleaner to clean both inside and outside of the dust bag.
4. Replace the dust bags.

LUBRICATION

Your Landis Sander is equipped with sealed bearings throughout, which should be replaced if they ever wear out.

Other parts should not require any lubrication, only cleaning the parts is required.

Lubrication will only attract dust and would be more harmful than helpful.

V-BELT ADJUSTMENT AND REMOVAL



WARNING: Disconnect electrical power supply before working on the machine

The 2 V-Belts on the Landis Sander should be checked monthly for proper tension and general condition. Loose V-Belt will decrease the power available to the various tools and lower the efficiency of your Sander.

If you discover a worn or frayed belt, replace it now so it won't break at an inconvenient time.

TO CHECK V-BELT TENSION

1. Disconnect the electrical power supply.
2. Check the tension of the V-belt running to the motor; it should depress approximately 1/2" when pressed in the middle with moderate force.
3. Rotate the V-belt by hand, visually inspecting the belt for damage.
4. If tensions or conditions are bad, adjust tension or replace V-belt.
5. To adjust the tension, unscrew the nuts on the 2 threaded rods. Move the motor plate up or down accordingly to your needs.



WARNING: Do not over tighten V-Belt, as to do so will cause rapid belt wear and premature bearing failure. After making adjustments, remove all wrenches and other tools before operating the sander.

DUST BAG REPLACEMENT

1. Unbutton the bag



2. Squeeze the ring to unlodge the bags



3. Wash them

4. Reinstall bags in reverse order

MOTORS REPLACEMENT



WARNING: Motors replacement requires working with electrical wiring and can be hazardous. If you are not familiar with electrical procedures, please call a qualified electrician.

SANDING MOTOR

To remove the motor, these procedures should be followed:

1. Disconnect the electrical power supply.
2. From the rear of the machine, remove the four (4) screws, nuts, and washers holding the motor. Remove V-belt.
3. Remove motor electrical box plate and observe the electrical wires connected.
4. Mark the electrical wires to the motor such that you will be **ABSOLUTELY CERTAIN** where to reconnect them to the new motor.
5. Disconnect the electrical wires and the connector on the motor box.
6. Disconnect the electrical wiring by removing the electrical plate on the end of the motor. Mark the electrical plate on the end of the motor. Mark the electrical wires to the motor such that you will be **ABSOLUTELY CERTAIN** where to reconnect them on the new motor.
7. Reassemble with new motor in reverse order to the above procedures.



WARNING: Be absolutely certain to reconnect the electrical wire to the proper terminals. Failure to do so can result in improper motor rotation, a ruined motor, fire, or injury to yourself.

OTHER PARTS REPLACEMENT AND ADJUSTEMENT

SANDING SHAFT AND BEARING REPLACEMENT

Before removing sanding shaft and bearings, disconnect the power supply.

1. Take, the two bayonet off the machine.
2. Remove the front cover that is hidings the bearings.
3. Remove the 2 sanding belts from the machine.
4. Unscrew the screws on the two felt or rubber wheels to slide those out of the main shaft.
5. Take off the V-Belt on the pulley. Leave it on the side between the bearing and the pulley. It will come out when you will pull the shaft.
6. Unscrew the two Allen set screws on the pulley.
7. Unscrew the 2 Allen set screws on each bearing and slide the shaft out on the left side. If there are marks or burrs on the shaft, sand those with fine sandpaper.
8. Unscrew the 2 hexagonal bolts on each bearing to change them.
9. Make sure to align the 2 new bearings to get the horizontability off the main shaft.
10. Reverse procedure to assemble and don't forget to put back the V-Belt on the shaft before sliding it in the first bearing.

HOW TO CHANGE THE IDLER WHEEL ASSEMBLY

1. Disconnect the electrical power supply.
2. Remove the sanding belt from the machine. First take out the tension on the idler wheel with the tension arm.
3. Remove the orange end cap.
4. Unscrew the hexagonal nut to take out the spring. Be careful: hold the spring with a pincer.
5. Unscrew the hexagonal bolt to dismantle the idler arm from the releasing system.
6. To take out the complete idler wheel assembly, unscrew the $\frac{3}{4}$ " hexagonal bolt.




NOTE: You need somebody to retain the idler when the mechanic is doing this operation.




7. Install the new idler wheel assembly. Make sure that the tracking T arm is parallel with the sanding belt.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Lost of suction in dust collection	<p>Dust drawer may be full</p> <p>Blower fan may be clogged</p> <p>Sander too close to the back wall</p> <p>Dust bag may be clogged</p>	<p>Empty it</p> <p>Clean it</p> <p>Your Sander should be 6" away from the wall</p> <p>Clean/replace the bags</p>
Belt creeps	Belt worn out of frayed on one side	Install new belt
Motor stops with switch on	<p>Too much equipment operated on same circuit on which Landis S-500 Sander is connected</p> <p>An overload may have caused the thermal overload protector in motor to shut off current</p>	<p>Check circuit breaker or fuse box.</p> <p>Be sure sander is off, then find and eliminate cause for overload.</p> <p>Motors are equipped with manual Re-Set thermal overload protector. After approximately 30 minutes you should be able to hear or feel overload protector click in when pushed to reset. After Re-Set clicks in, turn switch on and motor should run normally.</p>
Sanding belt 4" doesn't stay on the rubber wheel	<p>The sanding belt is misplaced</p> <p>Dirt is stuck under the sanding belt and on the wheels</p> <p>The spring isn't giving enough tension to the idler wheel</p>	<p>Pull or push the release tension arm to put at the right place</p> <p>Clean the wheels with a scraper or change the sandpaper</p> <p>Increase the tension on the spring unlock the nut and turn the threaded rod to pull the spring.</p>

ACCESSORIES

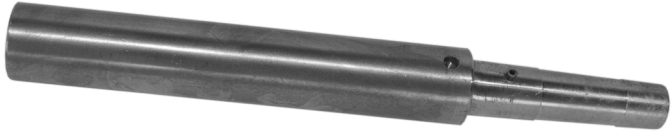

PART NUMBER	DESCRIPTION
SU1209753	<p>8" Yarn Brush</p>  <p>A circular brush with a light-colored, fibrous yarn material. It has a central metal hub with a hole and four small screws. The brush is mounted on a wooden base.</p>
P7141 P7142	<p>Brown Horsehair Brush</p>  <p>A circular brush with a dense, brown horsehair material. It has a central metal hub with a hole and four small screws. The brush is mounted on a wooden base.</p> <p>Black Horsehair Brush</p>  <p>A circular brush with a dense, black horsehair material. It has a central metal hub with a hole and four small screws. The brush is mounted on a wooden base.</p>


PART NUMBER	DESCRIPTION
SU1209756	Wire Brush 
SU1201684	Laminated Cloth Wheel 
ST6	6" Welt Cleaning Brush 

PART NUMBER	DESCRIPTION
SBW61 SBW82	6"x1" Soft Scotch Brite Wheel 8"x2" Soft Scotch Brite Wheel 
CCL	Spanner Wrench for Bayonet 
ANC12 ANC18	Naumkeag head complete 1/2" or 3/8" shaft 

PART NUMBER	DESCRIPTION
145010233 M10378 144739915 HPSM or 79100950	Pieces for heal breaster on bayonet with soft or hard sandpaper 
A162 A163	Scotch Brite polishing cone adapter with 4"x1" Scotch Brite polishing cone 
RCS - RCS24, 40, 60, 80 RCM - RCM24, 40, 60, 80 RCL - RCL24, 40, 60, 80	Tapered rubber sanding cone with sandpaper 

PART NUMBER	DESCRIPTION
M7591A	US Straight male bayonet 
SU1210991	US Tapered female bayonet with threaded extension 
SU1207193	US Tapered female bayonet 

PART NUMBER	DESCRIPTION
SU1207182	US Tapered male bayonet 
TSF31213	US Straight male bayonet with threaded extension 
CDAS CD50	US or 50mm Diamond heel breaster 40/50 grit 

PART NUMBER	DESCRIPTION
GRENADE + 86162070 / 86162080	Bedding rubber cone 2 1/2" x 1 3/4" and sandpaper 



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ACCESSORIES ON QUICK CHANGE BAYONET FITTING

Both ends of the sanding shaft are machined to accommodate bayonet fitting (quick change). Extra tools and sanding wheels are available on request. See the list at the end of this book.

When removing the quick change fittings, use the special spanner wrench supplied with the machine. To remove, engage the spanner in the hole near the end of the bayonet fitting and apply a sharp rap downward. Before putting on a fitting be sure the machine surfaces are clean. Hand tightening is sufficient to hold the fitting in proper position.



WARNING: FAILURE TO PROPERLY MOUNT THE ADAPTOR WILL RESULT IN FLYING APART AND POSSIBLE INJURY TO THE OPERATOR AND OTHERS IN THE WORK AREA.

THESE QUICK CHANGE ACCESSORIES SHOULD BE PROPERLY ENGAGED ON THE SHAFT TO ENSURE SAFE OPERATION. MAKE SURE PIN ON SHAFT ENGAGES THE ADAPTOR CORRECTLY.

SPANNER WRENCH



When removing the quick change fittings, use the black spanner wrench supplied with the machine. To remove, engage the spanner in the hole near the end of the bayonet fitting and apply a sharp rap downward. Before putting on a fitting be sure the opening ends are cleaned. Hand tightening is sufficient to hold the fitting in proper position.

N.B. When properly mounted, the bayonet fitting will tighten itself by rotating it in the socket in the opposite direction of the sanding belt rotation.

HEEL BRASTER ON BAYONET



A Heel breaster mounted on a quick change adaptor is provided with your Sander and can be used on the left side of the main shaft.

Verify that the sandpaper is well placed on the cone so that the 2 ends of it are in the groove of the cone.