



CT191

10" WET BENCH GRINDER

USER MANUAL

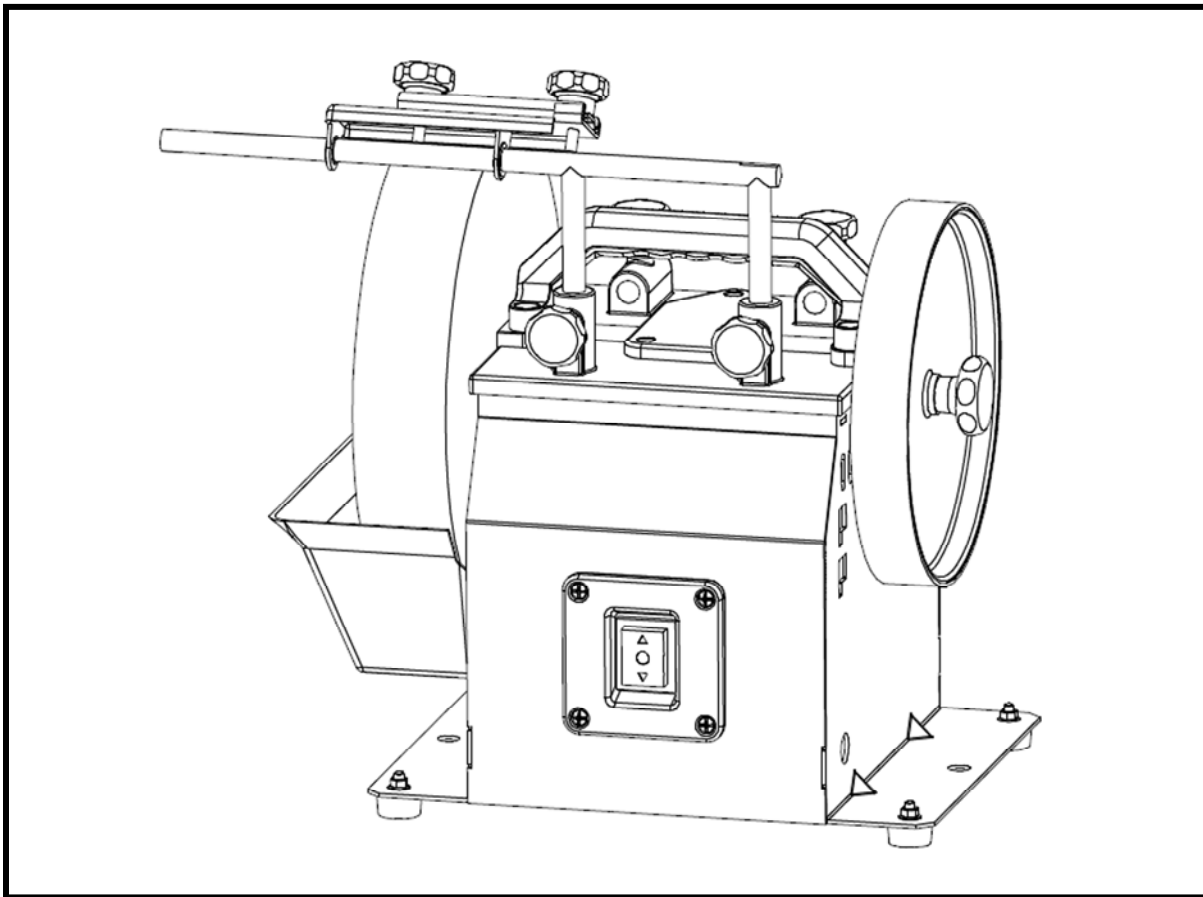


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GENERAL SAFETY INSTRUCTIONS FOR MACHINES

Extreme caution should be used when operating all power tools. Know your power tool, be familiar with its operation, read through the owner's manual and practice safe usage procedures at all times.

- ❖ **ALWAYS** read and understand the user manual before operating the machine.
- ❖ **CONNECT** your machine ONLY to the matched and specific power source.
- ❖ **ALWAYS** wear safety glasses respirators, hearing protection and safety shoes, when operating your machine.
- ❖ **DO NOT** wear loose clothing or jewelry when operating your machine. Wear protective hair covering.
- ❖ **A SAFE ENVIRONMENT** is important. Keep the area free of dust, dirt and other debris in the immediate vicinity of your machine.
- ❖ **BE ALERT! DO NOT** use prescription or other drugs that may affect your ability or judgment to safely use your machine.
- ❖ **DISCONNECT** the power source when changing drill bits, hollow chisels, router bits, shaper heads, blades, knives or making other adjustments or repairs.
- ❖ **NEVER** leave a tool unattended while it is in operation.
- ❖ **NEVER** allow unsupervised or untrained personnel to operate the machine
- ❖ **NEVER** reach over the table when the tool is in operation.
- ❖ **ALWAYS** keep blades, knives and bits sharpened and properly aligned.
- ❖ **ALL OPERATIONS MUST BE** performed with the guards in place to ensure safety.
- ❖ **ALWAYS** use push sticks and feather boards to safely feed your work through the machine.
- ❖ **ALWAYS** make sure that any tools used for adjustments are removed before operating the machine.
- ❖ **ALWAYS** keep bystanders safely away while the machine is in operation.
- ❖ **NEVER** attempt to remove jammed cutoff pieces until the blade has come to a full stop.

CT191 - 10" WET BENCH GRINDER SPECIFIC SAFETY INSTRUCTIONS

- ❖ **ALWAYS** read and understand the user manual before operating the grinder.
- ❖ **MAKE SURE** you are wearing safety glasses while operating the grinder. The small particles becoming airborne during grinding operation can seriously damage your eyes.
- ❖ **ALWAYS** wear a dust mask or a respirator while grinding. The dust produced during grinding process can lead to serious respiratory problems if inhaled.
- ❖ **MAKE SURE** before making any adjustments, servicing or installing parts, the switch is in the "OFF" position, and the cord is un-plugged from the power source.
- ❖ **MAKE SURE** the RPM of the wheel you are installing on the grinder is equal to or higher than the speed of the grinder. Operating wheels at a higher speed than rated for may cause the wheel to lie apart, fly or break.
- ❖ **MAKE SURE** to keep your hands at a safe distance from the wheel.
- ❖ **NEVER LEAVE** the grinder unattended while it is running.
- ❖ **MAKE SURE** to do a test on the grinding wheels before installation. Wheels that do not pass the test are not safe to use. See page-8 for details.
- ❖ **ALWAYS** stand to the side of the grinder when turning it ON and let the wheel reach full speed. Stand at least one minute to the side of the grinder after startup. A damaged wheel can break apart and fly shortly after starting the grinder.
- ❖ **DO NOT** grind on the side of the wheel, unless the wheel is rated for side grinding.
- ❖ **ALWAYS** keep the tool rest within 1/8" distance from the wheel while operating the grinder.
- ❖ **MAKE SURE** you have read and understood all the safety instructions in the manual and you are familiar with your grinder, before operating it. If you fail to follow the instructions given in this user manual, serious injury could occur.

WARNING!

The safety instructions given above can not be complete because the environment in every shop is different. Always consider safety first as it applies to your individual working conditions.



CT191 – WET BENCH GRINDER

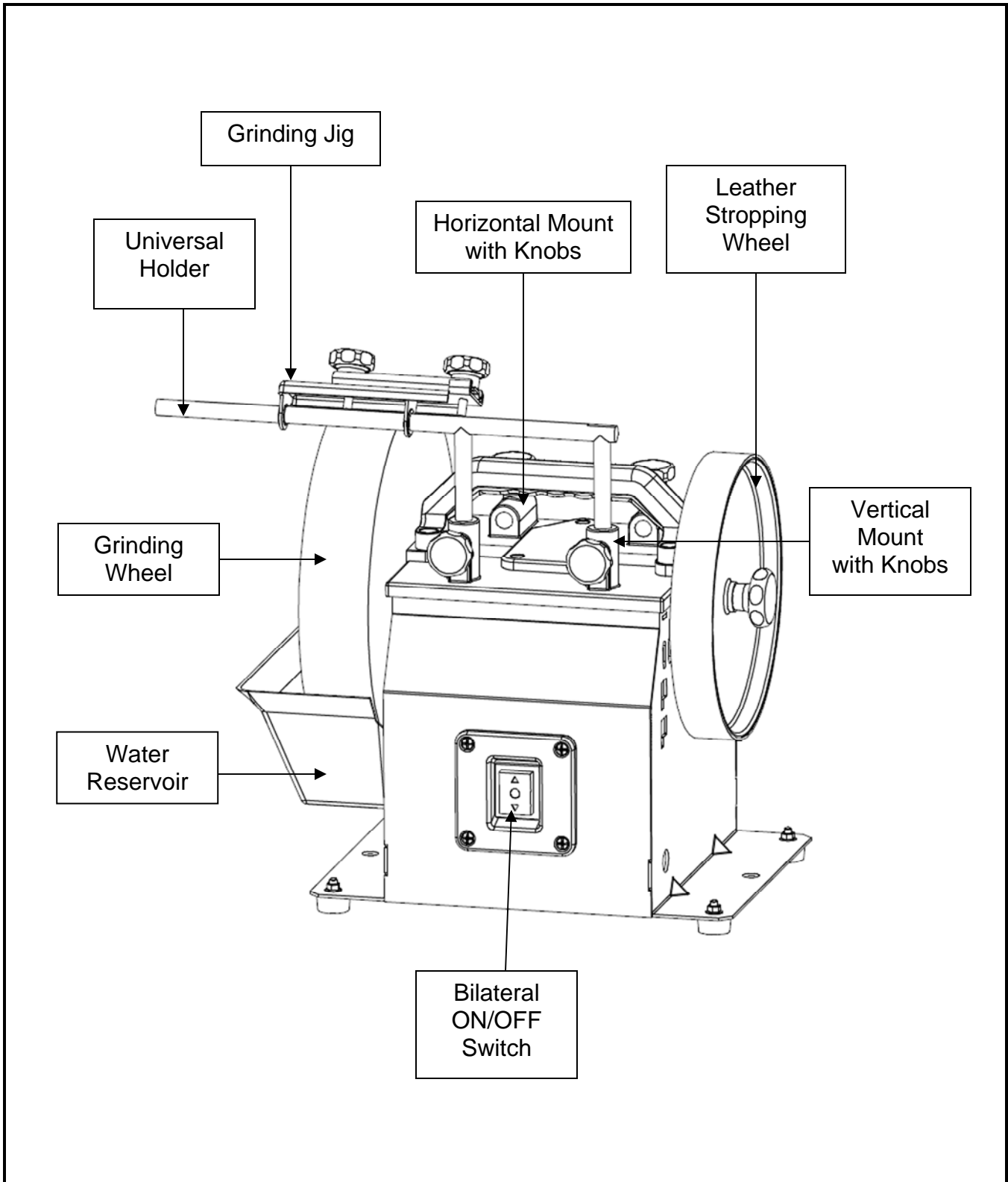
FEATURES

MODEL CT191 - 10” WET BENCH GRINDER

As part of the growing line of Crafttex woodworking equipment, we are proud to offer the CT191, a 10” Wet Bench Grinder. The Crafttex name guarantees Craft Excellence. By following the instructions and procedures laid out in this user manual, you will receive years of excellent service and satisfaction. The C191 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- ⊞ Motor 1/4-HP, 120-Volts, Single Phase, 60-Hz
- ⊞ Amps 1.6 Amps
- ⊞ Grinding Wheel Diameter 10"
- ⊞ Grinding Wheel Thickness... 2"
- ⊞ Grinding Wheel Material Aluminum Oxide
- ⊞ Grinding Wheel Grit 220
- ⊞ Arbor Diameter 12mm (1/2")
- ⊞ Stropping Wheel Diameter... 8"
- ⊞ Stropping Wheel Thickness. 30mm (2")
- ⊞ Stropping Wheel Material Leather
- ⊞ Wheel Speed 115 RPM
- ⊞ Weight 37 lbs
- ⊞ Warranty 2 Years

CT191 - 10" WET BENCH GRINDER PHYSICAL FEATURES



PROPER GROUNDING

Grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

Make sure the cord is plugged into a properly installed and grounded power outlet. To prevent electrical hazards, have a qualified electrician ensure that the line is properly wired.

Make sure that the appliance is connected to an outlet having the same configuration as the plug. If an adaptor plug is used, it must be attached to the metal screw of the receptacle.

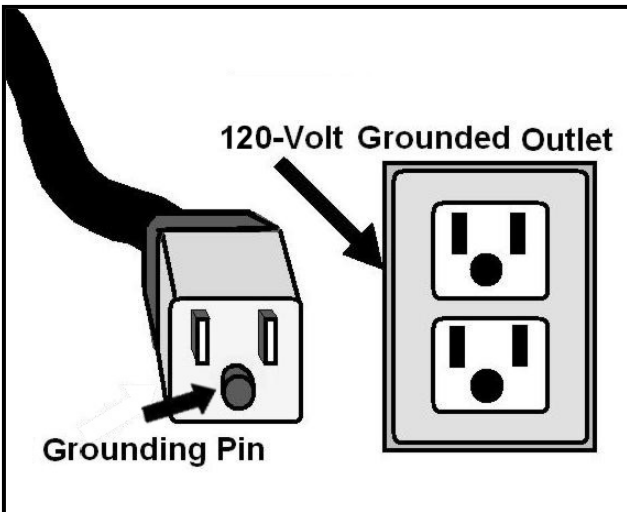


Figure-1 120-Volts outlet for CT191

It is strongly recommended not to use extension cords with your CT191. Always try to position your machine close to the power source so that you do not need to use extension cords.

In case if you really find it necessary to use an extension cord, make sure the extension cord does not exceed 50-feet in length and the cord is 14-gauge to prevent motor damage.

WARNING!

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.

UNPACKING

The machine is properly packaged and shipped completely in carton for safe transportation. When unpacking, carefully inspect the carton and ensure that nothing has been damaged during transit. Open the carton and check that the grinder and the parts are in good condition.

NOTICE!

While doing inventory, if you can not find any part, check if the part has already been installed on the machine. Some parts come pre-assembled for shipping purposes.

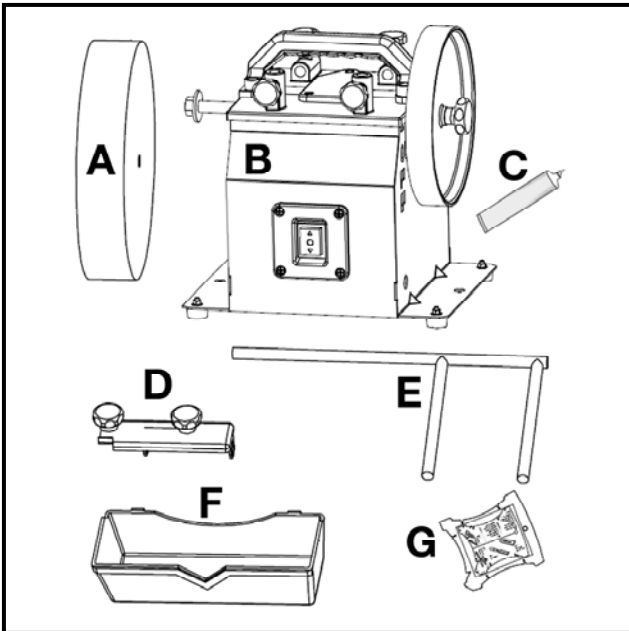


Figure-2 Inventory

INVENTORY

A. Grinding Wheel	1
B. Grinder	1
C. Honing Compound	1
D. Grinding Jig.....	1
E. Universal Support.....	1
F. Water Reservoir	1
G. Angle Guide	1

GRINDING WHEEL

The CT191 comes with a 10” diameter, 220 grit aluminum oxide grinding wheel. The grinding wheel should be inspected properly before installation.

Clean the dust and/or dirt from the surface of the wheel and inspect it for any cracks, dents, chips, or any kind of external damage.

To inspect the wheel for any internal damages:

Take the wheel up with a finger through the hole located in the middle of the wheel and tap it using a wooden mallet or a light non metallic object as shown in figure-3.

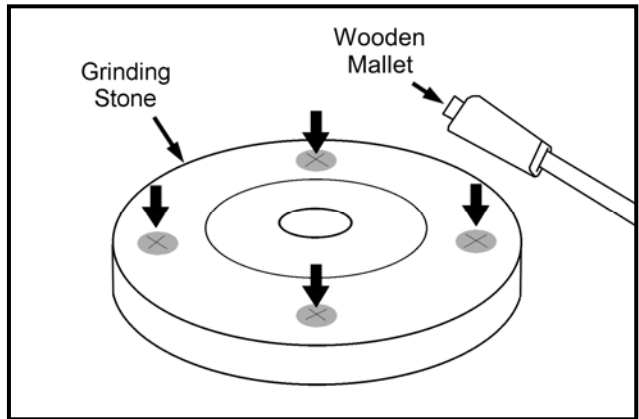


Figure-3 Tapping locations on the grinding stone when inspecting for internal damage

Tapping the wheel with the mallet will create a sound, based on which you will be able to know if the wheel is damaged or not. If the wheel is undamaged, the sound omitted will have a clear or “ping” sound. If the wheel is damaged the sound will have no clear tone.

WARNING!

Tapping the wheel with heavy or metallic objects can damage the grinding wheel.

GRINDING SURFACE

The grinding surface of the wheel should be parallel with the universal support.

Make sure the switch is in the OFF position and the cord is disconnected from the power source.

Lower the universal support 1/8" above the grinding wheel and check if the grinding surface of the wheel is parallel to the universal support by rotating the wheel slowly with your hands.

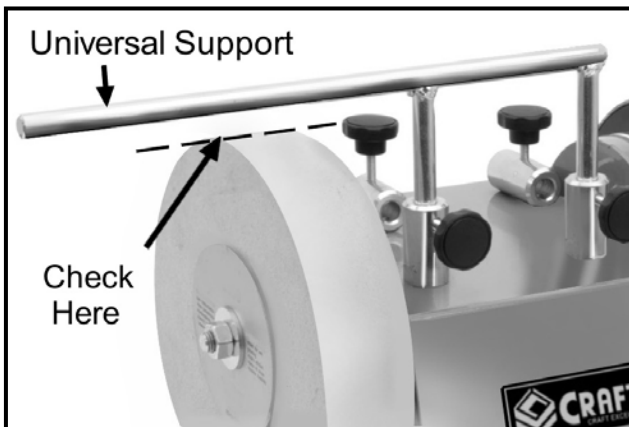


Figure-4 Checking the grinder wheel surface parallelism with universal support

TEST RUN

Once you have assembled and inspected the machine it is then time to do a test run and see if the machine powers up and runs properly.

All the tools and objects used for assembling the machine should be removed and cleared away during test run.

Connect the machine to the correct power source and start the machine. During the test run if there is any unusual noise or vibration, disconnect the machine from the power source immediately. Check all the parts you have assembled, once again and try to find out the problem.

During the test run make sure the start/stop button and all the safety features on the grinder are working properly.

WARNING!

Do not make any adjustments while the machine is running. Turn the machine OFF and un-plug from the power source before making any adjustments. Failure to do so may cause serious personal injury.

WATER RESERVOIR

The CT191 is a wet grinder and is equipped with a water reservoir. Do not attempt to perform grinding on this machine without water. If the grinder is used without water, it will either damage the grinding wheel or the tool you are grinding.

The water reservoir is equipped with mounting tabs used to hook to the slots on the grinder body.

The water reservoir can be attached to the lower slots of the grinder body when the grinder is not in use while it is attached to the upper slots, (filled with clean water) when in use.

Make sure not to keep the grinding wheel inside the water when the grinder is not used for a long period of time. Failure to do so, can cause the wheel become unbalanced and break off easily while grinding. The reservoir should be emptied and attached to the lower mounting slots when the grinder is not used.

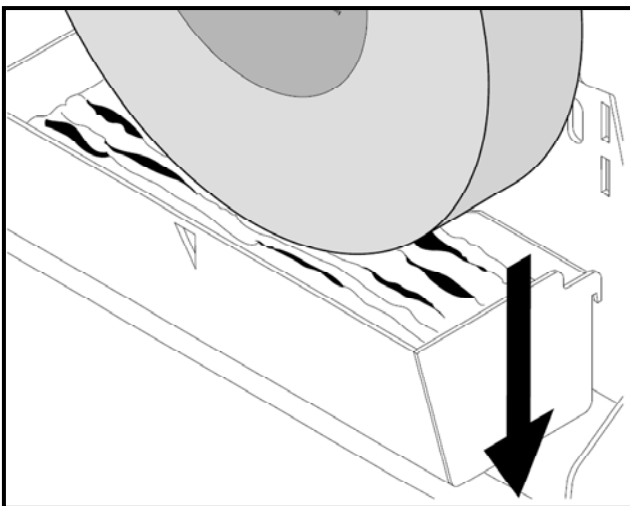


Figure-5 Installing water reservoir

UNIVERSAL SUPPORT

The CT191 is equipped with a universal support which can be mounted on the grinder in horizontal or vertical position depending on the grinding job. The vertical and horizontal position of the universal support allows grinding with the hand against the rotation of the wheel.

GRINDING WITH THE ROTATION OF THE WHEEL

Grinding with the rotation of the wheel removes small amount of material and provides a smooth result. This method is used for blades, chisels, knives, etc...

To set the universal support for grinding with the rotation of the wheel:

Turn the switch to OFF position and make sure the cord is unplugged from the power source.

Install the universal support through the horizontal mounts on the grinder and secure it by tightening the knobs properly as shown in figure-6.

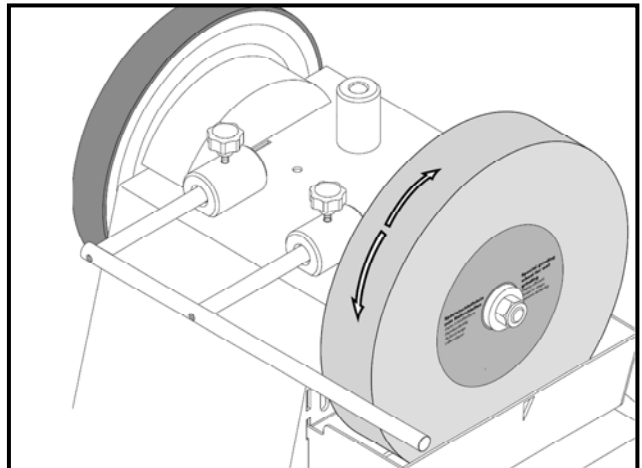


Figure-6 Installing the universal support horizontally for grinding with the rotation of the wheel

AGAINST THE ROTATION OF THE WHEEL

Grinding against the rotation of the wheel removes a large amount of material in a very short time and finally the result will not be very smooth. Coarse tools are sharpened against the rotation of the wheel.

To set the universal support for grinding against the rotation of the wheel:

Turn the switch to OFF position and make sure the cord is unplugged from the power source.

Install the universal support through the vertical mounts on the grinder and secure it by tightening the knobs properly as shown in figure-7.

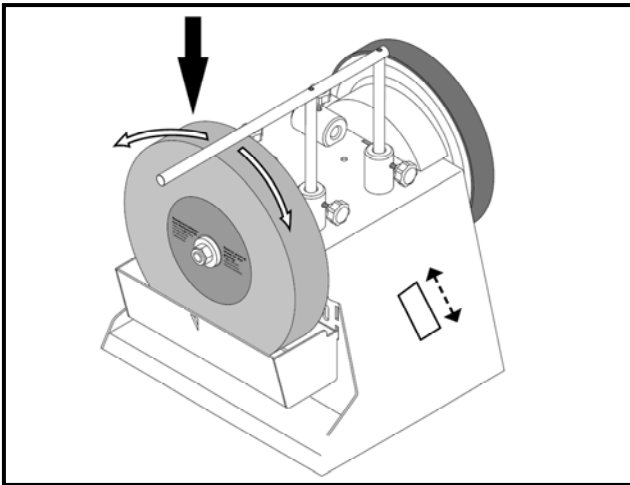


Figure-7 Installing the universal support vertically for grinding against the rotation the wheel

WARNING!

Do not perform any sharpening job on the leather honing wheel against its direction of rotation. Failure to do so will seriously damage the leather honing wheel.

GRINDING JIG

The grinding jig provided with the CT191 is used for securing a variety of tools, and can be positioned to grind with and against the wheel rotation.

To mount the grinding jig:

Disconnect the cord from the power source.

Slide the grinding jig onto the universal support, as shown in figure-8.

Insert the tool into the jig clamp, then use the angle guide, as described in the manual to set the grinding angle.

Once the grinding angle is set, tighten both the lock knobs to secure the tool in place.

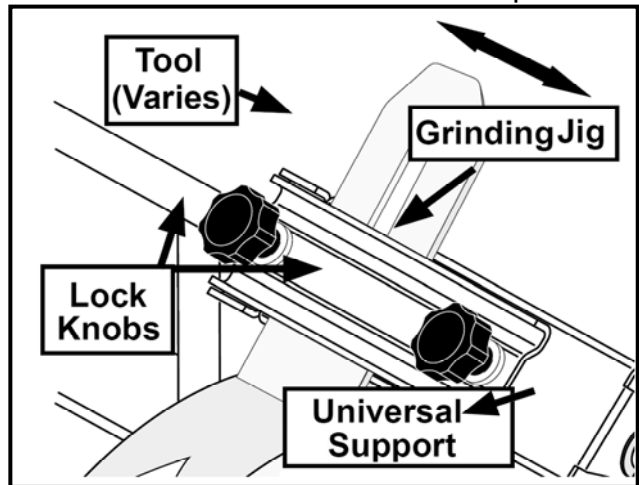


Figure-8 Grinding jig

ANGLE GUIDE

Your CT191 grinder comes with an angle guide allowing you to find the cutting angle of your tools.

Using the angle guide is simple and easy. It features 2 angle measuring notches on each side.

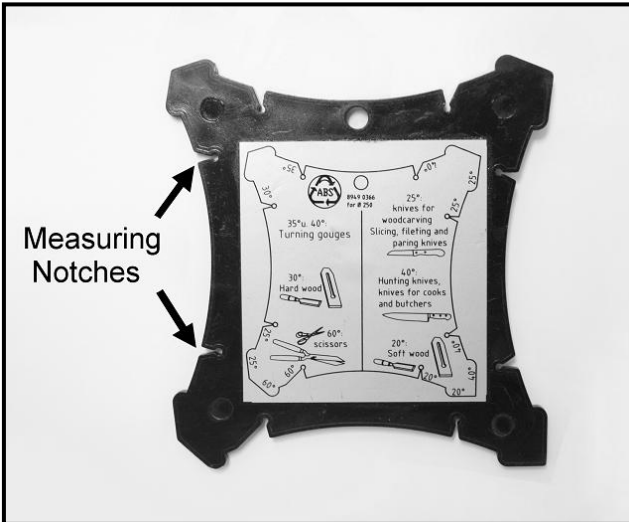


Figure-9 Angle guide measuring notches

To find the cutting angle on your tool using angle guide:

Place the sharpened edge of the tool into each measuring notches and find the notch best fits the tool you want to grind.

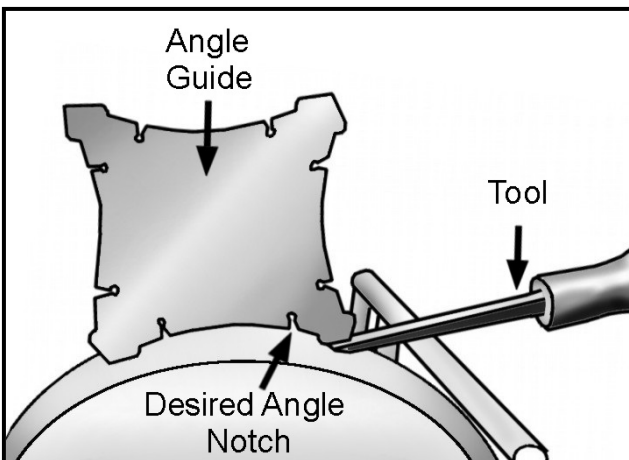


Figure-10 Using angle guide

Position the angle guide on the grinding wheel with the side having the best fit measuring notch as shown in figure-10.

HONING COMPOUND

The CT191 comes with honing compound used on the leather honing wheel to give smooth and razor sharp edge results when sharpening tools.

Make sure the switch is in the OFF position and the cord is disconnected from the power source.

First, apply a light coat of machine oil on the leather honing wheel and then apply a thin coat of the abrasive honing paste. Spread the paste on the wheel properly with your hand.

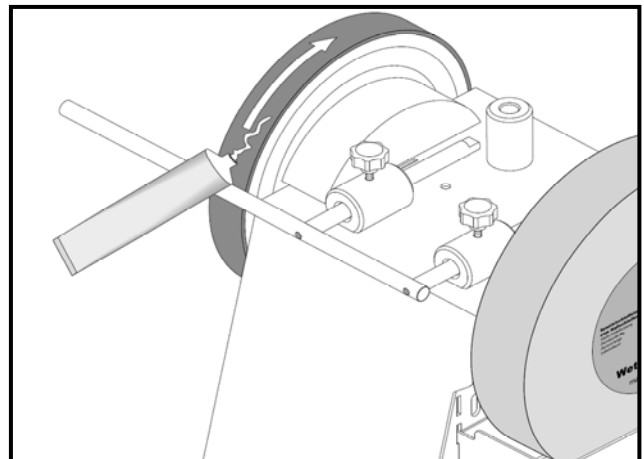


Figure-11 Honing compound

Plug the cord into the power source and turn the machine ON distributing the paste evenly on the wheel using a spreader.

WHEEL DRESSING

Depending on the type of grinding you do, the grinding wheel may require periodic dressing.

A variety of dressing tools are available (not included) and can be used to restore the abrasive quality of the wheel surface and bring the wheel edge back to the right form. Refer to the instructions that comes with the dressing accessory for complete details on how to properly dress a wheel.

When grinding, metallic objects become heated quickly. It is important to keep moving the object back and forth across the face of the grinding wheel and to cool the object frequently using the coolant tray.

REPLACING THE GRINDING WHEEL

Make sure the switch is in the OFF position and the cord is disconnected from the power source.

Loosen the nut shown in figure-11 securing the grinding wheel by holding the wheel with one hand.

Remove the nut, washer, and grinding wheel and replace the wheel with a new one.

Make sure to inspect the new grinding wheel properly before installation. For details see “Grinding Wheel” on page-8.

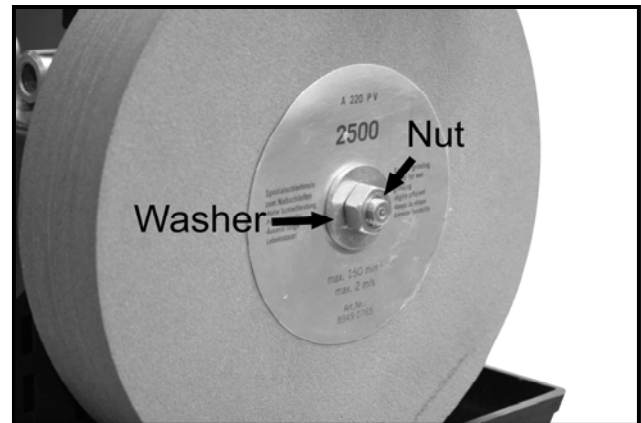
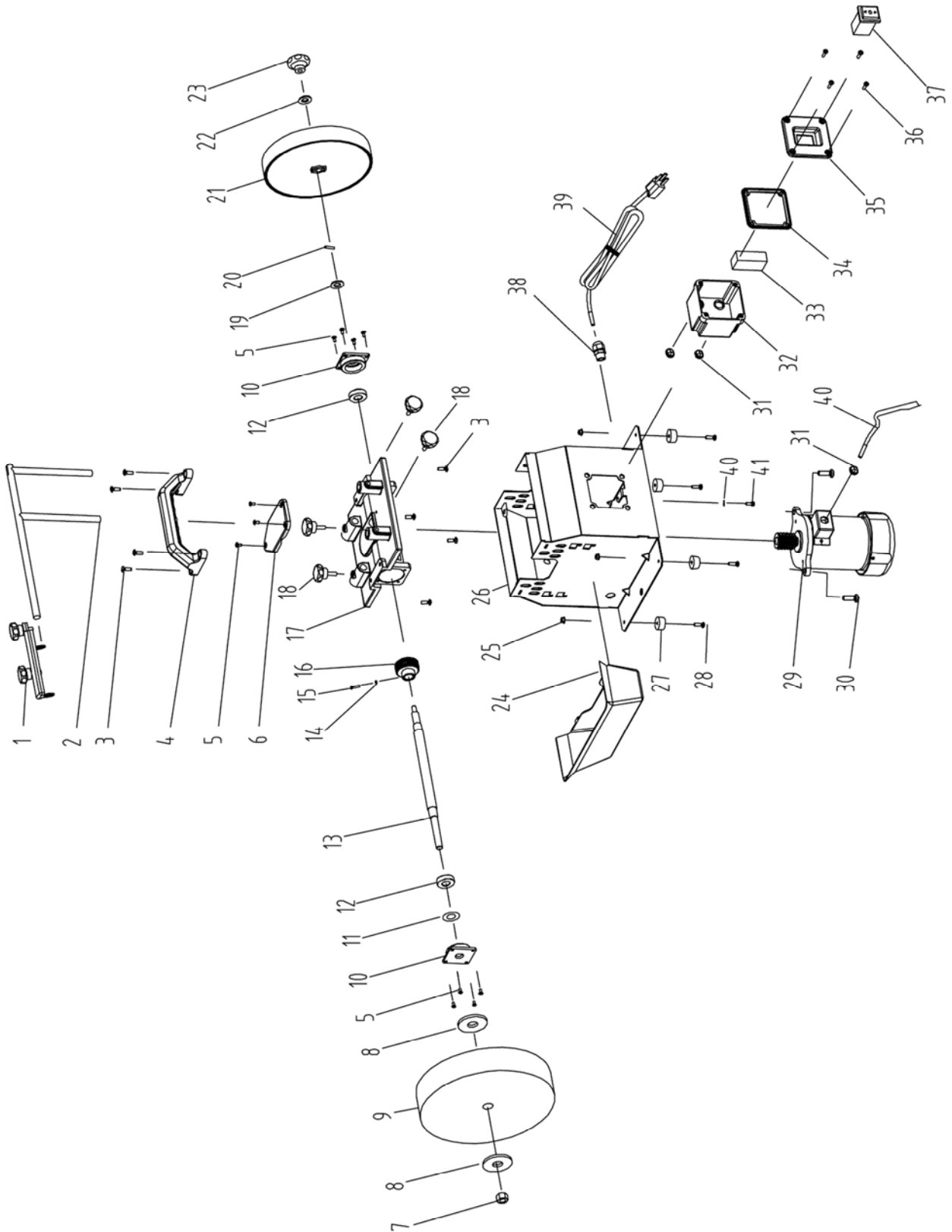


Figure-12 Installing the grinding wheel

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Motor will not start.	Low voltage.	Check power source for proper voltage.
	Open circuit in motor or loose connections.	Inspect all connections on motor for loose or open connections. (Send for Servicing.)
	Blown fuse or breaker.	Replace fuse or reset breaker.
Motor overheats.	Motor overloaded.	Reduce load on motor.
	Extension cord too long and of insufficient gauge (weight).	Utilize 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. (Send for servicing)
	Low voltage.	Correct low voltage conditions (for example: 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 or breaker.
	Motor overload.	Reduce the load on the motor.
Stropping wheel loses performance	Insufficient wheel preparations	Prepare wheel.
	Wheel is damaged	Replace wheel.
Wavy condition on surface of workpiece.	Machine vibrating.	Make sure machine is securely positioned on a level surface.
	Workpiece is not held in place firmly.	Use a holding device to firmly retain the workpiece.
	Wheel face uneven.	Dress the grinding wheel.

CT191 PARTS DIAGRAM



CT191 PARTS DIAGRAM

Item	Specification		QTY	Item	Specification		QTY
1	Grinding Jig		1	24	Water reservoir		1
2	Universal Holder		1	25	Hex flange facing nut		4
3	Philips screw assy		8	26	Base assy		1
3-1	Flat washer	D6	8	27	Rubber foot		4
3-2	Spring washer	D6	8	28	Philips screw assy		4
3-3	Philip screw	M6×16	8	28-1	Philips screw	M5×16	
4	Handle		1	28-2	Big flat washer	D5	
5	Philips screw	M4×8	11	29	Motor assy		1
6	Worm gear case cover		1	30	Philips screw assy		2
7	Nut	M12	1	30-1	Flat washer	D8	2
8	Flange		2	30-2	Spring washer	D8	2
9	Grinding wheel	φ250×50 ×φ12mm	1	30-3	Philips screw	M8×35	2
10	Bearing block		2	31	Strain relife	6P4	3
11	Wave washer	D32	1	32	Wire connection box		1
12	Bearing	6002RZ	2	33	capacitor		1
13	Main shaft		1	34	Rubber mat		1
14	Spring washer	D5	1	35	Switch plate		1
15	Philips screw	M5×25	1	36	Tapping Screw	ST4.2×16	4
16	Worm gear		1	37	Bilateral ON/OFF switch		1
17	Worm gear case		1	38	Wire bushing		1
18	Knob	M6×10	4	39	Cord & plug		1
19	Washer	D12	1	40	Tooth locking washer		1
20	Round pin	φ5×22	1	41	Philips screw assy		1
21	Leather stropping wheel	φ200x30 xφ12.5mm	1	41-1	Flat washer	D4	1
22	Big flat washer	φ8	1	41-2	Spring washer	D4	1
23	Lock knob	M8	1	41-3	Philips screw	M4×8	1



WARRANTY

CRAFTEX 2 YEARS LIMITED WARRANTY

Craftex warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers **two years** for parts and 90 days for labor (unless specified otherwise), to the original purchaser from the date of purchase but does not apply to malfunctions arising directly or indirectly from misuse, abuse, improper installation or assembly, negligence, accidents, repairs or alterations or lack of maintenance.

Proof of purchase is necessary.

All warranty claims are subject to inspection of such products or part thereof and Craftex reserves the right to inspect any returned item before a refund or replacement may be issued.

This warranty shall not apply to consumable products such as blades, bits, belts, cutters, chisels, punches etceteras.

Craftex shall in no event be liable for injuries, accidental or otherwise, death to persons or damage to property or for incidental contingent, special or consequential damages arising from the use of our products.

RETURNS, REPAIRS AND REPLACEMENTS

To return, repair, or replace a Craftex product, you must visit the appropriate Busy Bee Tools showroom or call 1-800-461-BUSY. Craftex is a brand of equipment that is exclusive to Busy Bee Tools.

For replacement parts directly from Busy Bee Tools, for this machine, please call 1-800-461-BUSY (2879), and have your credit card and part number handy.

- All returned merchandise will be subject to a minimum charge of 15% for re-stocking and handling with the following qualifications.
- Returns must be pre-authorized by us in writing.
- We do not accept *collect* shipments.
- Items returned for warranty purposes must be insured and shipped pre-paid to the nearest warehouse
- Returns must be accompanied with a copy of your original invoice as proof of purchase. Returns must be in an un-used condition and shipped in their original packaging a letter explaining your reason for the return. Incurred shipping and handling charges are not refundable.
- Busy Bee will repair or replace the item at our discretion and subject to our inspection.
- Repaired or replaced items will be returned to you pre-paid by our choice of carriers.
- Busy Bee reserves the right to refuse reimbursement or repairs or replacement if a third party without our prior authorization has carried out repairs to the item.
- Repairs made by Busy Bee are warranted for 30 days on parts and labour.
- Any unforeseen repair charges will be reported to you for acceptance prior to making the repairs.
- The Busy Bee Parts & Service Departments are fully equipped to do repairs on all products purchased from us with the exception of some products that require the return to their authorized repair depots. A Busy Bee representative will provide you with the necessary information to have this done.
- For faster service it is advisable to contact the nearest Busy Bee location for parts availability prior to bringing your product in for repairs.