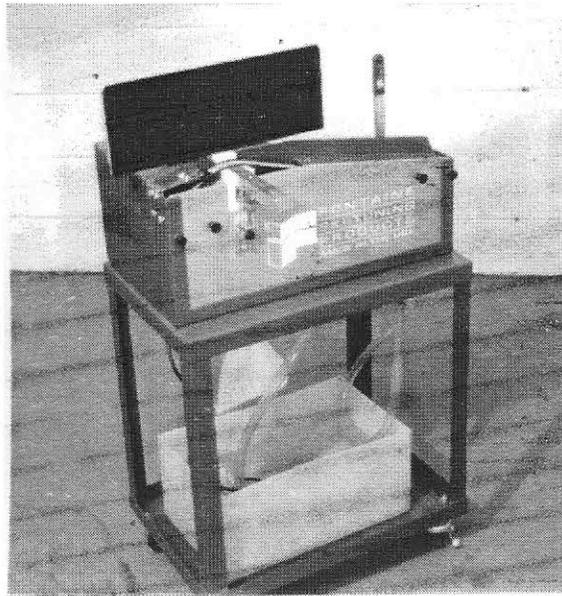




# OPERATORS MANUAL MODEL 304



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# SAFETY

## 1. KNOW THE MACHINE

Read and understand the operators manual. Learn the machine's operation, application, and possible hazards.

## 2. KEEP UNIT GROUNDED

The machine is equipped with a 3 wire cord for use on internally grounded electrical systems. Make sure your electrical system is grounded and that the machine is connected to its power source in an approved manner by a competent electrician

## 3. KEEP GUARD IN PLACE

Never operate machine with belt guard door removed.

## 4. WEAR PROPER APPAREL

Never wear loose clothing or jewelry that may be caught in moving parts. Always use safety goggles while using abrasive belts.

## 5. KEEP WORK AREA CLEAN

Cluttered areas, beaches and slippery floors invite accidents. It is recommended to use a piece of outdoor carpet under the machine to absorb the mist generated by the wet grinding process.

## 6. DISCONNECT FROM POWER SOURCE

Unplug or turn off power at the source before doing maintenance or repairs on the machine.

## 7. KEEP MACHINE CLEAN AND IN GOOD WORKING ORDER

Replace worn or broken parts. Clean grinding residue from the belt area of the machine daily with the spray hose.

**WARNING: DO NOT SPRAY ANY PART OF THE MACHINE EXCEPT THE BELT AREA. KEEP SPRAY AWAY FROM PUSH BUTTONS AND ELECTRICAL BOX.**

## 8. KEEP VISITORS AWAY

All visitors should be keep at a safe distance from the work area.

## 9. NEVER LEAVE THE MACHINE RUNNING UNATTENDED

# SAFETY INSTRUCTIONS TO OPERATOR

Read and understand the following steps before operating the machine.

**Caution: DO NOT CONNECT TO POWER SOURCE UNTIL YOU HAVE**

- a. Read and understand the instruction manual carefully.
- b. Completed the installation instructions.
- c. Examined and completed operating familiarity with the ON and OFF switch.
- d. Dressed with proper apparel, safety glasses, no loose clothing.
- e. Check to be sure belt guard door is in place.
- f. Make sure abrasive belts are of the water proof type.
- g. Make sure all straps and brakes are tucked away or removed.

## INTRODUCTION

You have purchased the "state of the art" in tuning machinery. We, at Fontaine Metal Products have spent thousands of hours on the design and development of a machine to do the best and most efficient job of ski and snowboard tuning. We are committed to stay out in front with new development to make your tuning operation the most advanced available anywhere. Spend a little extra time right now and carefully read this operators manual. Learn the machine operation and the care and maintenance required to keep your machine operating at peak efficiency.

## UNPACKING

1. Cut plastic bands and remove box top sleeve.
2. Stand machine upright.
3. Check for any shipping damage that may effect the operation of the machine.
4. Remove packing from pump and place it upright in the tank.

## CONNECT THE POWER SOURCE

A separate, single phase circuit must be provided for the machine. Check the tag on the power cord for the voltage cannot be changed unless coolant pump and switch are changed.

**WARNING:** Improper electrical connection may result in hazards to the operator, and will void the warranty on all electrical component of the machine. For your protection consult an electrician qualified to work on machinery to confirm the proper power source.

1. Test source with a volt meter.
2. Check fuse or breaker.
3. Connect receptacle and plug to conform with local and national codes.
4. Fill water tank 3/4 full.
5. Start machine without belt in place. Check motor and pump operation.

## POSSIBLE PROBLEMS

**Machine Cabinet Electrically "Hot.":** A ground wire has been connected improperly to a hot line lead. Consult an electrician and repeat steps 1 through 3 above.

## GRINDING PREPARATION

Before operating the machine make sure the section on electrical power requirements has been met.

1. **Fill the water tank:** 3/4 full and add the recommended cutting fluid according to direction on the container.

**CAUTION:** Some cutting fluids contain nitrates, these fluids will cause damage to the brass and zinc plated parts of the machine. Use only the cutting fluid supplied by Fontaine Metal Products.

2. **Install an abrasive belt:** Open belt guard door (E) fig. 3, move belt release handle to the release position (A) fig. 2, and slide belt over wheels. Move belt tension handle to the tension position and replace belt guard door.

3. **Tracking Belt:** Center belt on wheels. Jog machine by holding the stop button down and tapping the start button. Turn the tracking knob (B) fig. 2, clockwise to move the belt away from the center of the machine. Once the belt is tracking on the center of the contact wheel, only minor adjustments will be necessary from time to time. Note direction arrows on some brands of belts.

4. **Preparation:** Remove or fasten all straps and ski brakes.

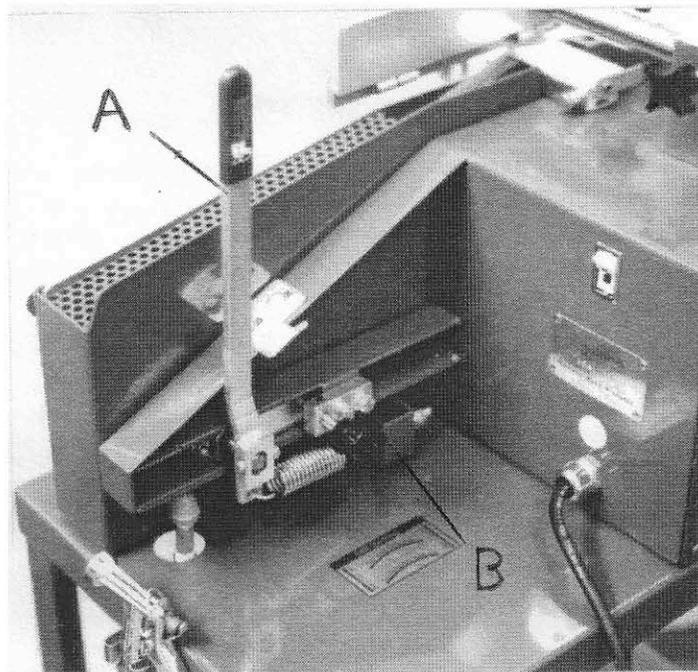
5. **Abrasive belts:** Always use the recommended cutting fluid. The fluid contains a rust inhibitor and grinding agents. Mix cutting fluid with water according to the directions on the container.

6. **Side edge preparation:** Slide the side edge guide (A) fig. 3, forward to approximately the center of the contact wheel. Lift up the base edge guide and swing down the height adjustor (B) fig. 3, or remove it from the belt guard door slot. With the machine off, place ski or board on the machine. Line up the belt and the edge so that the grinding pass will contact the belt at all times. Make sure cutting fluid system is on and operational before grinding.

FIG 1.



FIG 2.



7. **Base edge preparation:** Place the ski or snowboard base guide and the height adjuster in the belt guard door slot or lift up the base edge guide and flip up the height adjuster (B) fig. 3.

With the machine off, place ski on the machine and turn knob until contact is made with the ski edge. Reduce height of the base edge guide by turning knob 1/8 of a full turn. Move the lateral adjustment guide (C) fig. 3, so that the base edge only contacts the belt. With the machine off, move the spring pin forward until only base edge will be ground. To fine tune the base edge grinding area, use the belt tracking adjustment. Make sure cutting fluid system is on and operational before grinding.

## GRINDING OPERATION

1. **Base edge grinding:** Make sure all preparation adjustments have been made before grinding base edge. Do not use the ski base edge guide to grind snowboard base edges. While making the pass, keep both hands on the ski or board. Make sure ski or board is level to the machine to eliminate uneven grinding fig. 4, Grind edge from tip to tail. After each pass, inspect the edge. Only a few passes should be needed to produce a new edge. It is recommended to change the position of the side edge guide from time to time to fully utilize the belt. Do not over grind or grind without the grinding fluid system on.

2. **Side edge grinding:** Make sure all preparation adjustments have been made before grinding the side edge. Hold the ski or board with both hands. Grinding the side edge takes more skill than grinding the base edge so make sure you have the process down before starting. While making the pass walk forward with the ski or board. Keep pressure forward on the side edge guide without any downward pressure fig. 5, The weight of the ski or board is enough downward pressure for a sufficient side edge grind. too much downward pressure may over grind or damage the edge. After each pass inspect the edge. Only a few passes should be needed to produce a new edge.

3. **Side edge beveling:** With the side edge guide you can produce a 1, 2, or 3 degree bevel. Use the adjustment knob at the back of the side edge guide to angle to guide to the appropriate degree (A) fig 6. There are 4 notches at the center of the back side of the side edge guide (B) fig 6. The first notch is 0 degree, the second, third, and fourth, are 1, 2, and 3 degrees.

FIG 3.

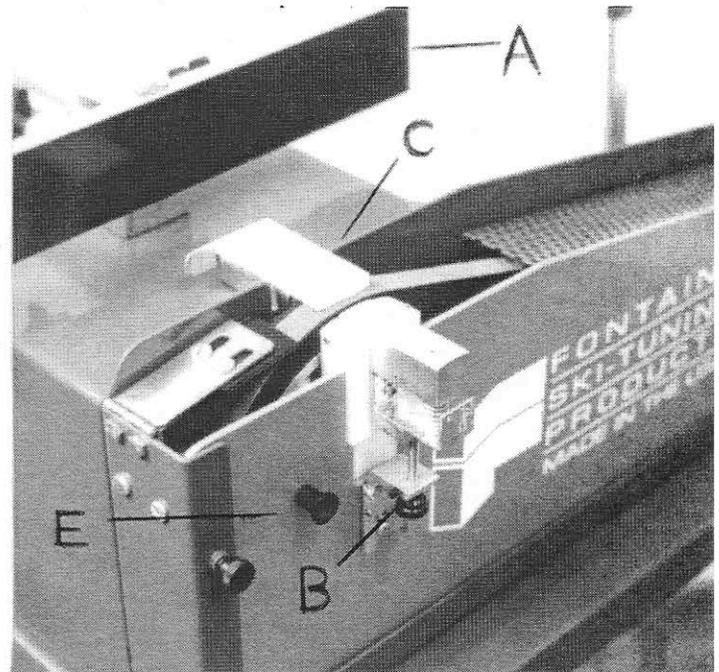
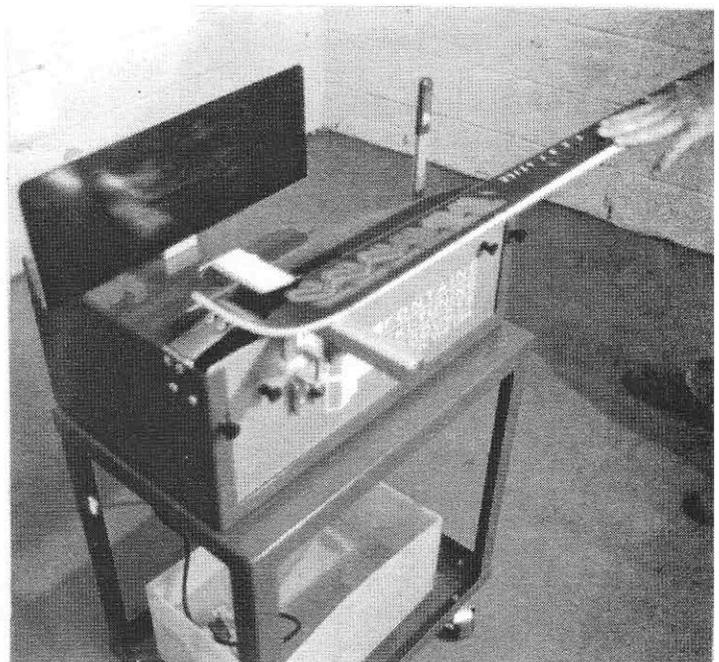
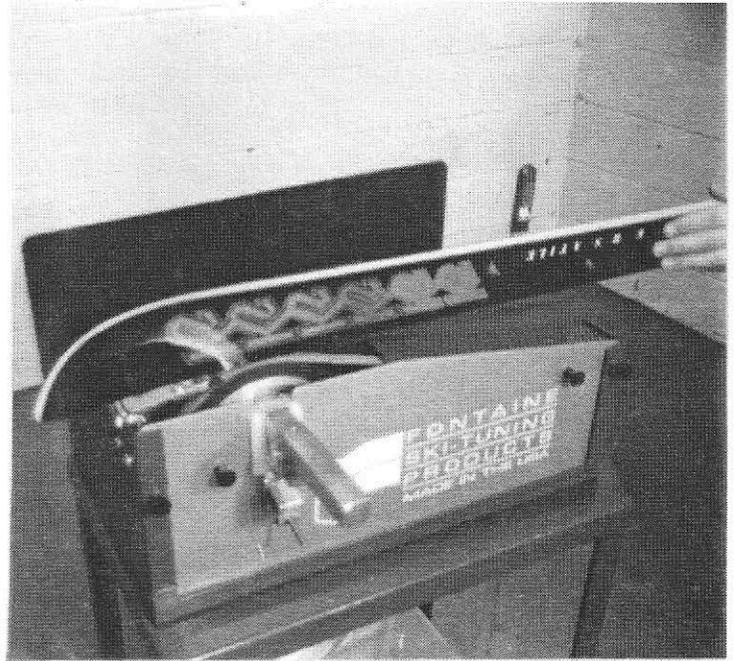


FIG 4.



**Practice:** Practice on a throw away ski or board prior to starting on customers boards. An hour of practice will make you a tuning expert. Quality is important. The Fontaine edge tuning Machine will finish a ski or board as good and in many cases better than new. Spend the time to get the method down pat. You will be able to turn out quality tuned skis and boards in volume.

FIG. 5



## POSSIBLE PROBLEMS

1. **Under grinding:** If the base edge guide is too high, your pass over the belt will not cut enough edge material. Re-adjust the height of the height adjustor to 1/8 of a turn down (B) fig. 3, Make sure to do the adjustments with the machine off.

2. **Over grinding:** If the belt cuts too much edge material, either the cutting fluid system is turned off or there is too much downward pressure. Check to coolant system tank fig. 7. Make sure its full. Also check the filter bag. Re-adjust the height of the base edge guide so that is level with the base edge, then turn it down to the proper height. If the over-grind is on the side edge, put more pressure against the side edge guide and less pressure down fig. 5

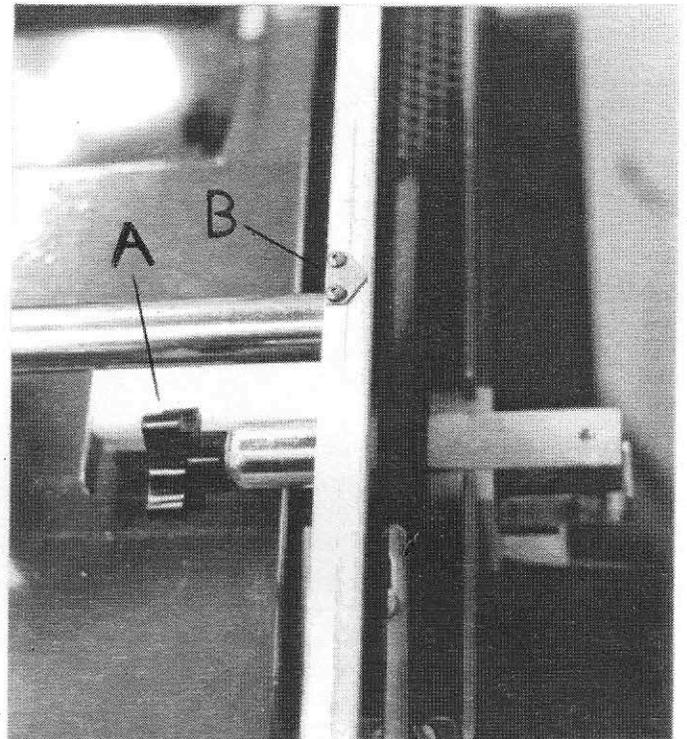
## RECOMMENDATIONS

1. **Water Pump:** Do not operate the machine without water in the tank. Water pump cooling depends on the pump running in water.

2. **Filter System:** Empty the filter bag fig. 7, before it is 3/4 full to prevent grindings from entering the water tank. Change filter at least once each day or after approximately 15 skis or boards, wash grindings from belt area into filter. With a standard screwdriver, loosen filter bag clamp and slide bag off ring. (A) fig. 7. When replacing the bag, make sure the clamp is tightened. If water spray nozzle becomes clogged due to grindings in the tank, remove spray nozzle and clean it out. It is imperative that a full flow of water be maintained to properly grind.

3. **Belt over spray:** Fold rubber flap under wheel overnight to keep it in contact with the belt to prevent over spray. A full flow of coolant on the belt is necessary for high quality board tuning. Some overspray is unavoidable.

FIG 6.



4. **Belt Tension Adjustment:** The model 304 machine is designed for 3/4" x 47" belts. If belt slipping occurs with any belt, take up spring tension a little at a time until the slipping stops.

FIG 7.

## MAINTENANCE

**Daily:** Empty filter bag daily or before the filter bag is 3/4 full. Wash grindings from the belt area into filter. Lift side of filter fig. 6, up away from plastic ring and slide off. **WARNING:** Do not allow spray to contact start buttons or other electrical components. Clean grindings from tracking mechanism. For Maximum useful life, keep the machine clean.

**Weekly:** Oil belt tension release pivot fig. 2, with motor oil. Thoroughly clean grinding residue from the entire machine. Use WD-40 on mechanical parts, and a good household cleaner on the cabinet.

**Monthly:** Add grease to fittings fig. 2, with a standard automotive grease gun. One or two strokes of the grease gun is sufficient. Oil casters with a few drops of motor oil. Tracking knob thread. Empty water tank, clean out grinding residue.

**Service Repairs:** The model 304 is designed to make repairs easy. In case of a component failure, the entire sub assembly can be removed and shipped to the factory on an exchange basis. To minimize down time, parts can be shipped out of stock C.O.D. Upon receipt of the worn assembly at the factory, a core charge credit will be issued, or a full credit in case of warranty replacement.

### Required for Disassembly, Service

Grease Gun, Oil Can, WD-40

Allen Wrench Set

Open End Wrenches 3/8      7/16      1/2      9/16

Screw Driver

**Drive Wheel:** To remove drive wheel, contact Fontaine Metal Products for tool kit and instructions.

**General:** Mechanical work service and repairs must be performed in a workmanship-like manner as with any piece of machinery. Parts returned with hammer marks or in an abused condition will not be covered under warranty.

