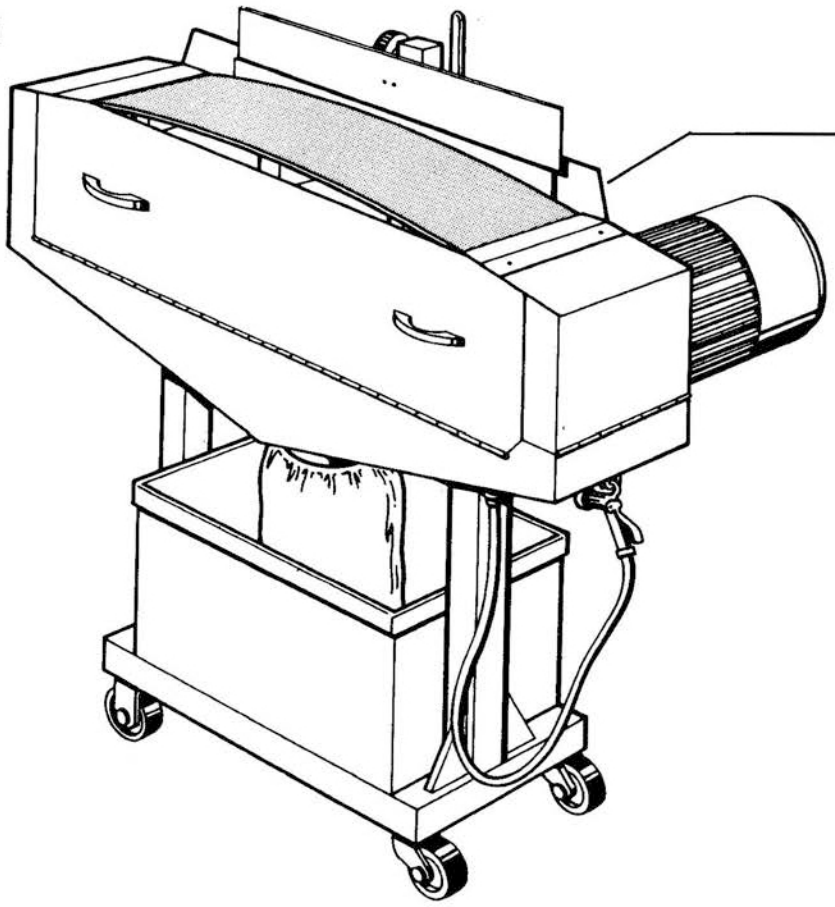
FONTAINE
SKI TUNING MACHINE

OPERATORS MANUAL

Model 604



Record the Serial No. and Model No. of your machine for future reference.

Model No._____

Serial No._____

David Rosso Sales **fontaineskituning.com** **(530) 307-0161**

SAFETY

1. ***Know the Machine***
   Read and understand the operators manual. Learn the machine's operation and 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 the machine with belt guard removed.

4. ***Wear Proper Apparel***
   Never wear loose clothing or jewelry that may get caught in moving parts. Always wear safety goggles while using abrasive belts.

5. ***Keep Work Area Clean***
   Cluttered areas, benches 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 any 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 machine daily with 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 kept at a safe distance from work area.

9. ***Never Leave 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 understood the instruction manual carefully.
b. Completed the installation instructions.
c. Examined and completed operating familiarity with the ON and OFF switches,
d. Dressed with proper apparel, safety glasses, no loose clothing.
e. Check to be sure belt guard is in place.
f. Make sure abrasive belts are of the waterproof type.
g. Make sure skis to be tuned have the safety straps removed.

INTRODUCTION

You have purchased the "state of the art" in ski 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 tuning. We are committed to staying out in front with new developments to make your ski 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 and 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 water tank.

CONNECT TO POWER SOURCE

A separate single phase circuit must be provided for the machine. CAUTION: The model 604 machine is available in 220 volt and 115 volt configuration. Check the tag on the power cord for the voltage requirements and wiring diagram of your machine. The voltage cannot be changed unless the 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 components 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.
- **Motor Starts-Stops** when start button is released. 220 volt machine connected to 110 volts. Consult an electrician.
- **Motor Overheats, Pump Cycles On and Off:** 110 volt machine connected to 220 volts. Consult an electrician.
- **Machine Runs then Stops:** Low voltage. Consult an electrician.

MACHINE OPERATION
SKI TUNING

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

1. Fill water tank 3/4 full and add the recommended cutting fluid according to directions on container. CAUTION: Some cutting fluids contain nitrites, 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 doors (A) Fig. 1, 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 shut belt guard doors.

3. Tracking Belt: Center belt on platen. Jog machine by holding the stop button down and taping start button. Turn the tracking knob (C) Fig. 7, clockwise to move the belt toward the center of the machine. Once the belt is tracking on the center of the platen only minor adjustments will be necessary from time to time. Note direction arrows on some brands of belts. When using cork belts for deburring, waxing and polishing turn water valve off.

4. Preparation: Remove old wax from skis prior to grinding by scraping. Remove safety straps.

5. Abrasive belts: Before using coarse grit belts (60 to 80) they must be dulled slightly. Hold an old file or metal bar across the belt with the machine running to remove the high spots in the abrasive material. Coarser belts are used to remove material fast and finer belts are used to finish. A coarse belt that is well worn will do a good job of finish grinding also. The best production procedure is to grind all skis that need considerable removable of material first. That is skis that are concave or convex or have base or edge damage. After the belt is worn and cutting slower go back over the same skis for one or two finishing cuts. Clean abrasive belts with a wire brush with the machine running. 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.

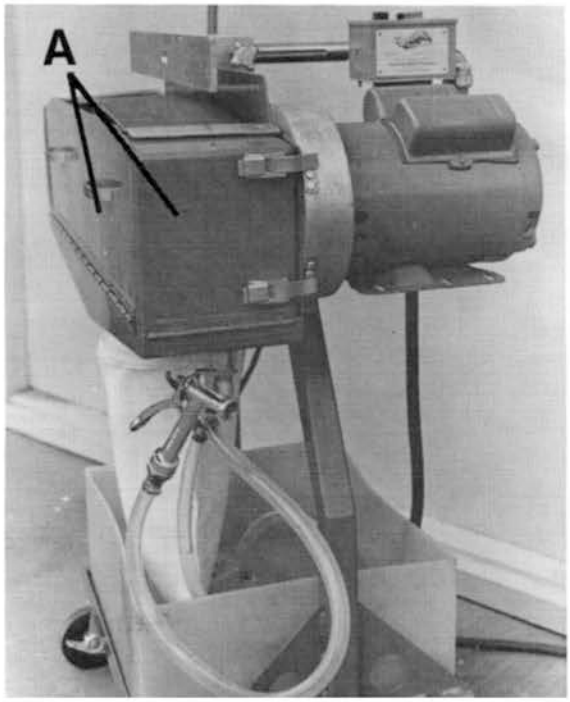


Fig.1

A BELT GUARD DOORS

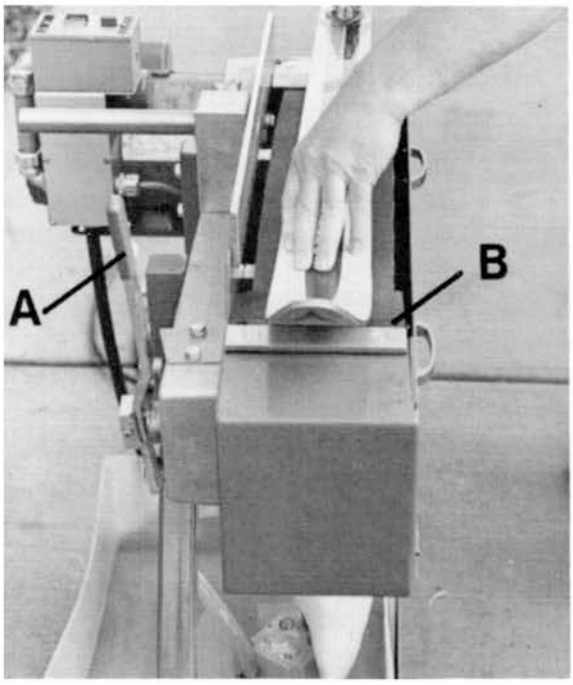


Fig. 2

A BELT TENSION RELEASE

B RUBBER FLAP

6. Base Grinding on Platen: Use smooth even passes over the entire ski length Fig. 2. Touch the shovel area of the ski to the belt and make a full length pass with medium pressure. After the first pass you can easily see the high and low spots in the ski base. Be careful not to drop ski edge on running belt. The edge can cut through belt and cause it to rip. Continue to grind the base until an evenly ground texture is present. Use a fine belt or a worn coarse belt on the last several passes for a fine finish.

7. Grindinç on Contact Wheel: The contact wheel is not recommended for base grinding. The contact wheel is used for work on tip protectors dulling tips and tails, grinding boots, and for refinishing ski tops. The contact wheel may be used for base grinding by experienced operators using even pressure in a steady continuous motion over the full length of the ski. Always finish the base on the platen to produce a true flat base.

8. Edge Sharpening: Move the edge guide (A) Fig. 4 to about 1/2 inch from the outside edge of the platen, allowing the bindings to clear the belt. Hold the ski flat against the edge guide Fig. 4, and with very light downward pressure run a full length pass on the ski edge. One pass on each edge is usually enough. CAUTION: Apply only very light downward pressure while grinding edges. The weight of the ski alone is usually enough. Too much pressure will cause heat build-up and may permanently damage the ski.

9. Edge Deburring-Base Polishing and Waxing: The 320 grit cork belt can be used to deburr edges and polish the base in the same operation. Run the ski base over the belt with the water valve (C) Fig. 6, off. Use light to medium pressure. For wax application hold a bar of wax on the running belt to fill the belt with wax. Run the ski base over the belt with light pressure taking care to keep the ski moving. Only skis ground close to perfecily flat can be waxed using the cork belt method. If shiny and dull spots appear on the ski base when waxing with the cork belt the ski base is not flat.

10. Detuning Edges: After grinding bases and edges, the ski edges are very sharp and must be dulled at the tips and tails and detuned slightly with a small oil stone along the entire edge. Some skiers are interested in doing some fine tuning on their own. Keep a supply of pocket oil stones on hand.

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

12. Note: to prevent overspray fold the rubber flap (B) Fig. 2 under the wheel overnight to keep the flap in contact with the belt.

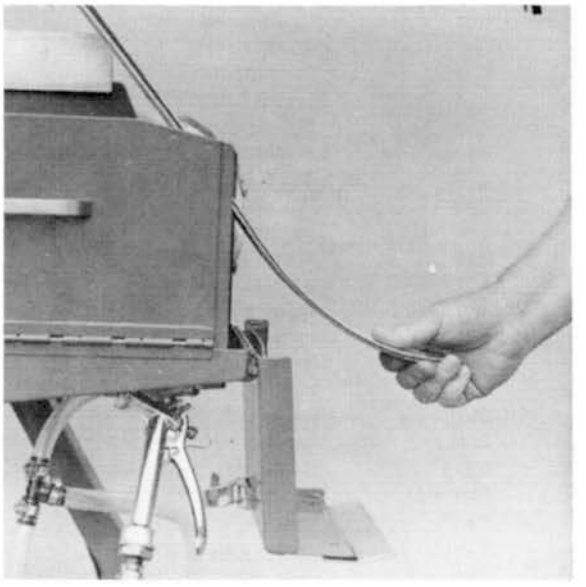


Fig. 3

GRINDING ON CONTACT WHEEL

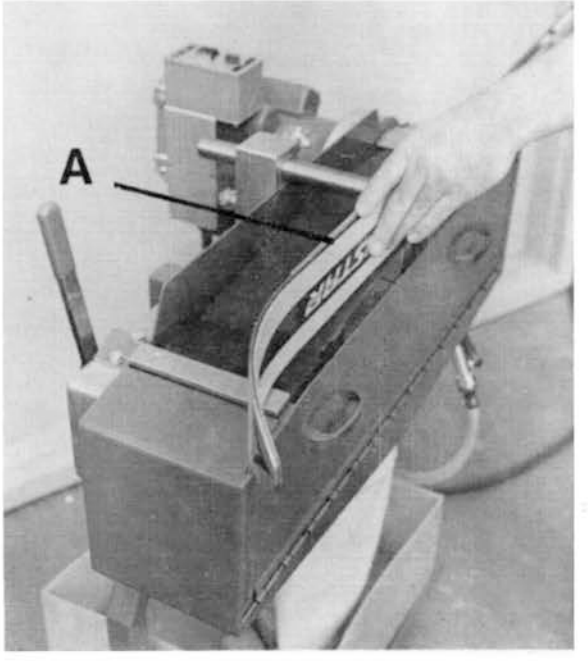
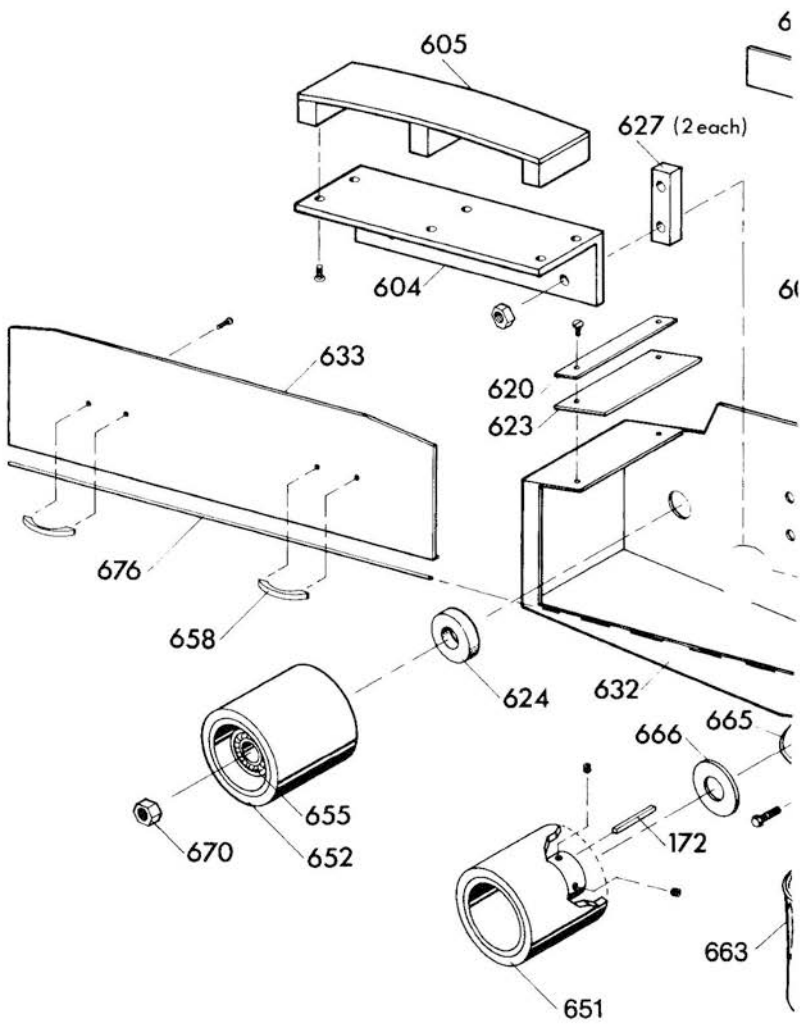
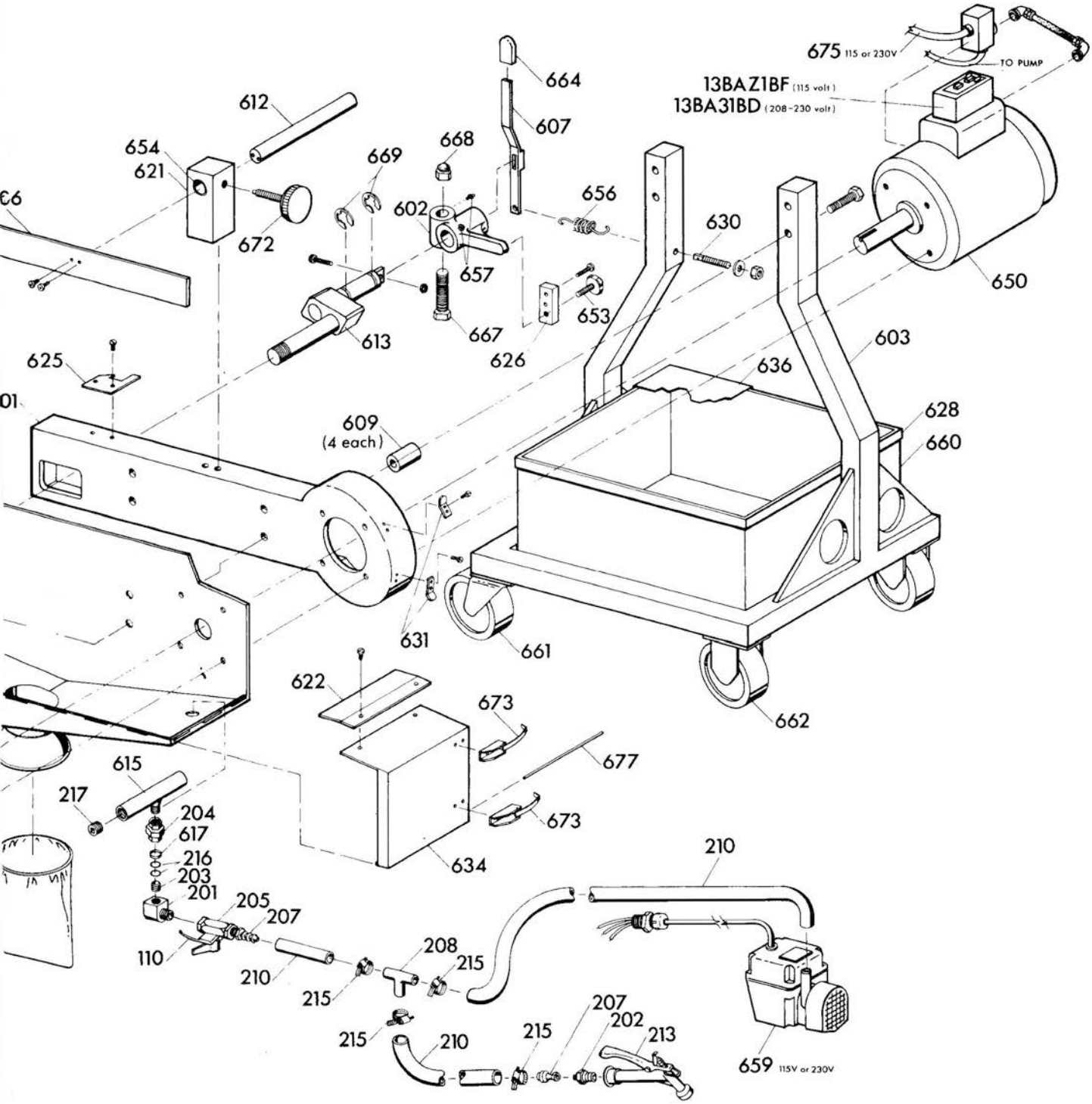


Fig. 4

A EDGE GUIDE

Part Number	Description
601	frame
602	tracking pivot
603	machine stand
604	platen mount
605	platen assembly
606	edge guide
607	belt release handle
609	frame spacer
110	nozzle hook
612	edge guide shaft
613	axle assembly
615	spray bar
617	spray bar spacer
620	flap plate
621	edge guide block
622	finger guard
623	flap
624	seal-idler
625	release handle lock
626	tracking knob holder
627	platen mount spacer
628	tank rim
630	spring adjuster
631	latch keeper
632	water channel
633	belt guard
634	door
633-W	belt guard — (wheel grinding)
634-W	door — (wheel grinding)
636	tank cover
650	motor
651	drive wheel
652	idler wheel
653	tracking knob
654	edge guide bushing
655	wheel bearing
656	spring
657	grease fitting
658	belt guard handle
659-115	pump (115 volt)
659-230	pump (230 volt)
660	water tank
661	caster swivel
662	caster fixed
663	filter bag
664	handle cover
665	filter mount
666	motor shaft
667	pivot bolt
668	pivot bolt nut
672	edge guide knob
670	axle nut
673	door latch
676	belt guard pin
677	door pin
201	1/4" street el.
202	hose to 1/4 NPT
203	close nipple
204	1/4 union
205	valve
207	1/4 NPT to 1/2 tube
208	1/2 hose T
210	1/2" tubing (order by the foot)
213	nozzle
215	screw clamps
216	o ring (set of two)
217	plug
13BA21BF	switch 115 volt
13BA31BD	switch 230 volt
675-115	power cord 115 volt
675-230	power cord 230 volt
172	key
669	snap ring
671	drive wheel hub — (not shown)




675 115 or 230V
TO PUMP
13BAZ1BF (115 volt)
13BA31BD (208-230 volt)
664
607
612
654
621
668
669
602
656
630
650
672
657
653
613
667
626
603
625
636
628
660
609
(4 each)
631
661
662
622
673
677
615
217
204
617
216
203
201
205
207
110
210
208
215
634
659 115V or 230V
202
213

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 (A) Fig. 5, before it is 3/4 full to prevent grindings from entering the water tank. Filter Change at least once each day or after approximately 30 pairs of skis, wash grindings from belt area into filter. Lift one side of filter up Fig. 5 and slide filter bag off ring. If water spray bar (A) Fig. 6 becomes clogged due to grindings in the tank, remove spray bar (D) Fig. 6, and clean out plug (B) Fig. 6. It is imperative that a full flow of water be maintained to properly grind skis.

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

4. Belt Tension Adjustment: The model 604 machine is designed for 5" x 60" belts. If belt slipping occurs with any belt take up spring tension a little at a time until the slipping stops.

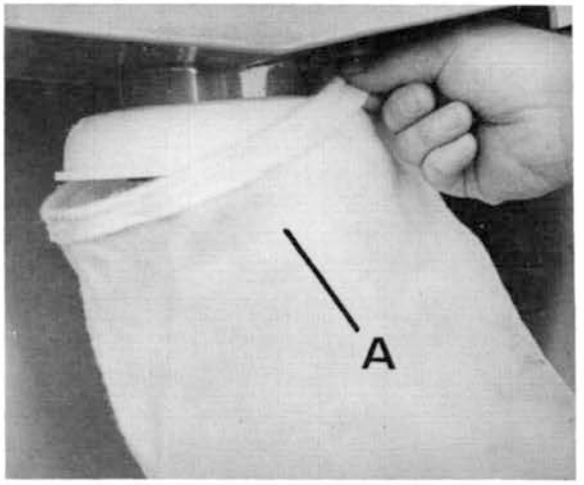


Fig. 5

A FILTER BAG

MAINTENANCE

Daily Empty filter bag daily or before the filter is 3/4 full. Wash grindings from belt area into filter. Lift side of filter (A) Fig. 5, 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. Spray with WD-40 and wipe clean with a rag. Important: For maximum useful life, keep the machine clean.

Weekly: Oil belt tension release pivot (B) Fig. 7, 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.

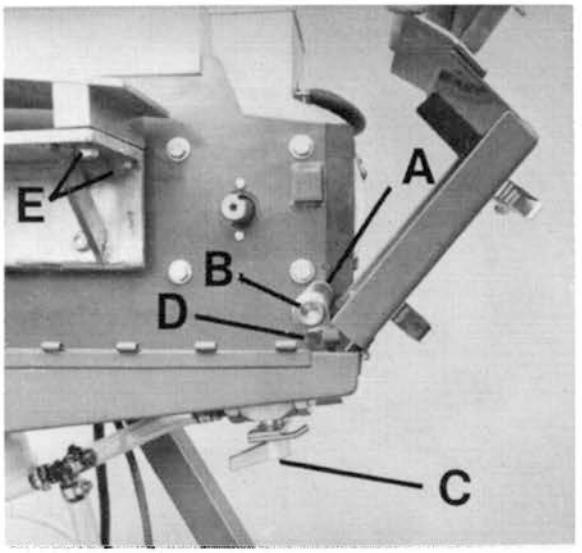


Fig. 6

A SPRAY BAR

B CLEAN OUT PLUG

C WATER VALVE

D SPRAY BAR COUPLING

E PLATEN BOLTS

Monthly: Add grease to fitings (A) Fig. 7 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. Oil tracking knob thread. Empty water tank, clean out grinding residue.

Annually lube motor grease fittings. Use two or three strokes maximum with grease gun. **Warning:** over-lubing will damage motor. Inspect machine for wear, check nuts and bolts for tightness.

Tracking knob friction device

The adjustable friction device consists of a small nylon plug under a set screw. The friction device prevents the tracking knob from backing out while the machine is running. If the tracking knob turns with very little effort with the belt released, tighten the set screw (F) Fig. 7.

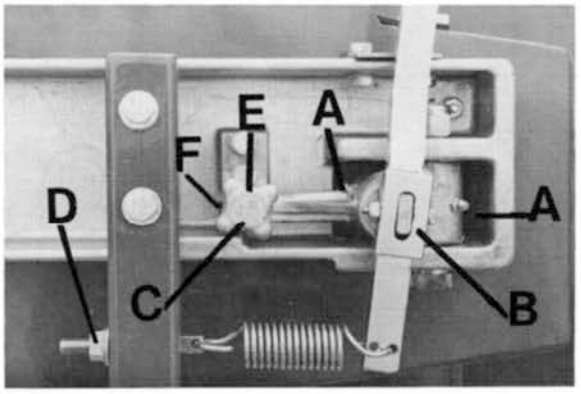


Fig. 7

A GREASE FITTINGS
B PIVOT POINT, OIL
C TRACKING KNOB
D SPRING TENSION ADJUSTMENT
E TRACKING KNOB THREAD, OIL
F TRACKING KNOB FRICTION DEVICE

Service Repairs The Fontaine Ski Tuning Machine 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.

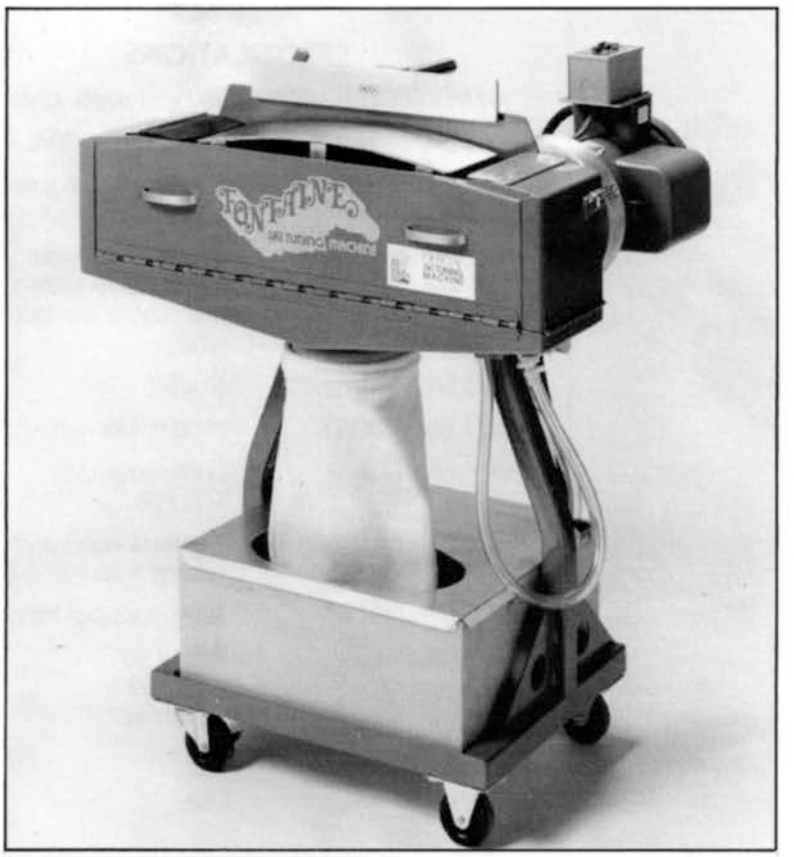
Required for Disassembly, Service
Grease Gun, Oil Can, WD-40
Allen Wrench Set
Open End Wrenches 3/8 7/16 1/2 9/16
Screw Driver

Platen Assembly Do not remove allen screws from platen surface. To remove platen, clamp one end of platen to the angle mount under the platen with a C clamp and remove 3/8 bolts from under side of mount (E) Fig. 6. Release clamp to release tension on platen.

Drive Wheel: To remove drive wheel contact David Rosso Sales 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.

NOTES



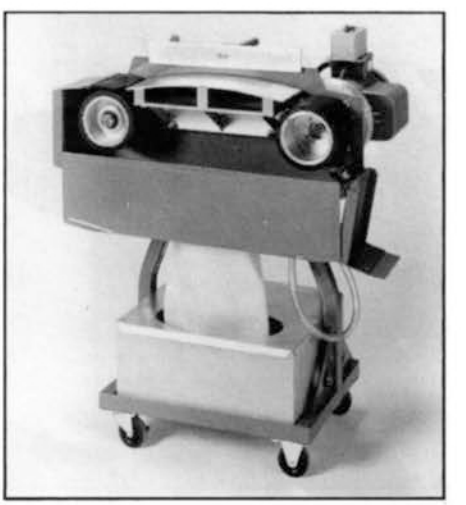
Model 604

SPECIFICATIONS

POWER REQUIREMENTS	115 volt or 230 volt single phase
MOTOR	1.5 H.P., direct drive
DRIVE WHEELS	6" diameter neoprene covered
GRINDING SURFACE	5" x 16" precision ground steel platen and rubber contact wheel.
BELT SIZE	5" x 60"
BELT LINEAR SPEED	2800 ft. per min.
COOLANT PUMP	Continuous duty 1/12 H.P.
COOLANT CAPACITY	7 Gallons water and cutting fluid
COOLANT FLOW	3.5 gallons per minute
DIMENSIONS	Height 40" Width 20" Length 30"
WEIGHT	175 lbs.
ORIGIN	USA

WARRANTY

All components manufactured by Fontaine Metal Products are warranteed for **two years** from date of delivery of the machine. The electrical components including motor, switch, and pump are covered by the original manufacturer's warranty of one year. The warranty covers defects in materials or workmanship, and covers cost of parts and labor. Items not covered on the warranty are rubber coverings on wheels and electrical contacts, or damage caused by neglect, abuse, or normal wear.

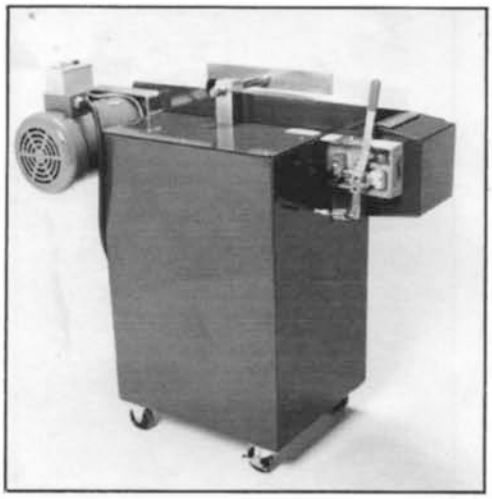


David Rosso Sales **fontaineskituning.com** **(530) 307-0161**

Model 680

SPECIFICATIONS

POWER REQUIREMENTS	230 volt single phase
MOTOR	2 H.P., direct drive
DRIVE WHEELS	6" diameter neoprene covered
GRINDING SURFACE	6" x 24" precision ground steel platen and rubber contact wheel.
BELT SIZE	6" x 80"
BELT LINEAR SPEED	2800 ft. per min.
COOLANT PUMP	Continuous duty 1/12 H.P.
COOLANT CAPACITY	7 gallons water and cutting fluid.
COOLANT FLOW	3.5 gallons per minute
DIMENSIONS	Height 40" Width 22" Length 42"
WEIGHT	286 lbs.
ORIGIN	USA



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