WEHMER
ORTHODONTIC & DENTAL PRODUCTS

SÆBUR SUPPLY
a division of WEHMER
ORTHODONTIC & DENTAL LLC

# *WEHMER* Dual Wheel Model Trimmer

## Operator's Manual and Trimming Guide



This manual describes operating procedures for the following models:



**108X2**

Product Specifications

108X2 / 110 3/4 HP motor, 110-120 volts, 60 Hz, 11.9A 1725 RPM
108X2 / 220 3/4 HP motor, 210-230 volts, 50 Hz, 6.5 A 1425 RPM

All motors are Split Phase, Thermally Protected, Moisture Resistant

Wheels Size: 12" x 3/16" x 1"

Dimensions: 21"W x 18"D x 15"H (55 cm W x 46 cm D x 39 cm H)

Shipping Weight: 69 lbs \ 31.2 kg

**Includes:**

**Installation Instructions**
**Component Overview**
**Model Trimming Guidelines**
**Parts Diagram and List**
**Preventive Maintenance**
**Troubleshooting Tips**
**Available Accessories**
**Shipping & Returns Policy**

## *Product Overview*

The Wehmer #108 Series of Model Trimmers is designed and manufactured to give the orthodontic laboratory technician the optimum equipment to create consistently accurate and esthetic study models. All of these dual wheel model trimmers are fitted with 12" coarse cutting and fine polishing wheels, a precision graduated work table, squaring and angulation tools, and a wide selection of options to customize your machine to meet your specific needs.

All #108 models are fitted with our upgraded 3/4 HP motors for excellent trimming performance and to maximize the potential of diamond abrasive cutting wheels. An adjustable water flow system assures efficient flushing of ground plaster debris from the work area.

Please read this manual carefully before operating your new trimmer to get the most out of its capabilities and maintain its long life span.

## Unpacking Your New Model Trimmer

After you've found the envelope with this manual, you should also find -

A) Your new Wehmer Trimmer face down in its custom packing material.
B) Aluminum trimming table with graduations.
C) A small cardboard box containing the following accessories:
   1. Squaring tool.
   2. Angulation tool.
   3. Angulation tool locking knobs (2).
   4. Trimming table locking knob.
   5. Water valve and work light if ordered.
   6. Flow regulator attached to the pipe union.
   7. Tool Kit.
   8. 3' clear drain hose



Remove all loose packing materials around the trimmer. The trimming table is in a padded envelope wrapped in bubble wrap. Do not throw this away. Leave the cardboard box with the accessories in position and lift the trimmer out of the box. Get some help if you're not accustomed to lifting 70 lbs. Remove all tape and protective packing materials from the machine. Pull out the cardboard box from below the motor and remove all accessories. Individual instructions are included with the water valve and work light (if ordered). Install these accessories at this time. Retain all packing materials for at last one month in the event you must return the trimmer for any reason.

### Installing Your Trimmer in the Work Area

#### Selecting the Work Area

Placing your trimmer on a flimsy surface can cause vibration and excessive noise. Choose a solid work surface in an area with adequate counter space that has easy access to the following utilities:

#### Water Connection (Electric Water Valve is optional)

An adequate pressurized water supply source must be provided for installation of your Wehmer Model Trimmer. An easily accessible on-off water shut-off valve must be provided in the water line immediately preceding the trimmer. Do not use the flow regulator #3006 attached to your model trimmer as an ON/OFF valve. It is recommended the water supply should be routinely turned off when the machine is not in regular use, regardless of whether the unit is equipped with the optional electric water valve. Your water source should be adaptable to a 1/8"NPT fitting and rigid or flexible 1/4" water line. Water Line Connection Kit #3890 is available from the Wehmer Corporation. Attach the outlet end of the water supply to either the flow regulator #3006 or the inlet side of the electric water valve. Connect the pipe union #3154 to complete the installation.

#### Drain Connection

Your Wehmer trimmer is fitted with a 3' section of 3/4" ID drain hose which should be run to a sink or directly to a plaster trap. Long horizontal runs of the drain hose can negatively impact on the trimmer's ability to expel waste and can cause clogging of the drain line. To protect plumbing systems, it is always recommended to run trimmer waste water through a plaster trap (Wehmer #1641, 16406, or 16408 on page 10).

#### Electric Supply

Check the specification label on your machine located on the motor and make sure your electric source matches the specs on the label. Always make your connection to a grounded electrical outlet with sufficient overload protection and GFI . Never use an extension cord or power strip; plug this trimmer directly into a wall outlet.

Place your unpacked trimmer on the counter, or on the optional #1126 Drain Tray. Make sure the location you have chosen gives the technician sufficient clearance and access to safely operate the machine. Depending on local regulations , it may be required to fasten the trimmer to your countertop. Two holes are provide in the base of the unit through which fastening bolts can be attached.

Make your water and electrical supply connections, and connect the drain hose to a drainage outlet fitted with a plaster trap. If the drain hose must travel over a long stretch of countertop, it is advised to raise the machine to increase drainage potential. Wooden blocks or the #1126 Drain Tray can be utilized for this purpose.

#### Test Run

Put on your safety glasses! Eye protection must always be worn when running any model trimmer.
Before installing the trimming table and tools:
1. Turn on water supply and check for leaks.
2. Turn on the trimmer via the on-off switch on back of motor. Keep hands, fingers, hair, clothing, and objects away from the grinding wheels. Do not grind models or plaster until the trimming table and tools are installed.
3. Make sure that your trimmer is running vibration free and that water is flowing onto both wheels. There will be some slight splashback on the coarse wheel until the trimming table #3170 is installed.

#### Installation of Trimming Table and Tools

Refer to parts diagram on page 6 for item identification.
Find the two **angulation tool locking knobs** #3301 and place them, with the knurled end toward the countertop, into the slots in the sill of the trimmer. Take the trimming table #3170 with the slots and graduations facing you and flip it over. Find the black plastic trimming table knob #3172 and screw it into the hole in the middle of the trimming table - just far enough that the threads catch.
Flip the trimming table back so that the numbers are facing up, and slide it onto the sill of the trimmer. The long, smooth edge of the trimming table should face the operator. Line up the threaded part of the trimming table knob with the slot in the middle of the sill. Push the table in towards the grinding wheels as far as it will go, and securely tighten the black plastic trimming table knob from underneath the table.

**The Squaring Tool** #3130 slides in and out in the grooves in front of each grinding wheel. It allows you to grind perfectly flat surfaces on the bottom bases of models.

**The Angulation Tool** #3140 is the one with a threaded stud, and a T-square-looking horizontal plate which is adjustable via the small knurled nut on top of the tool. The stud on the bottom of the tool pokes through either hole in the trimming table, and is screwed down and tightened via the locking knobs suspended from the sill. This tool can be rotated to an infinite number of locations along a circular scale in the table, and can be locked in place for positively accurate angle grinding of your study model bases. Tool location is determined by lining up the notch in the open end of the angulation tool with the degree indications marked on the trimming table.



**New Quick Release Angulation Tool**
**Now Available! Part # 3140Z / 3301Z**

*Your #108 Wehmer Dual Wheel Model trimmer is now ready for operation! Here's a short description of the basic components before you start grinding-*




## Trimming Table

This is the platform on which all of your trimming work is performed. It is precision calibrated to be at 90° to the working surfaces of the grinding wheels. The table is easily removable for cleaning, and is marked with degree reference points for a full 240° at each grinding position. The oversized work area is conducive to optimum access and utility of the grinding operations. A commercial grade engraved and anodized table #3071 can be ordered as a replacement.

## Trimming Tools

Squaring Tool #3130 - specifically designed for grinding model bases parallel to the occlusal surfaces, as well as grinding of posterior corners and lateral surfaces. The rubber pad protects the teeth of the model from breakage.

Angulation Tool #3140 - the T-shaped adjustable tool is used for precision grinding of the angles of the model base. The Angula- tion Tool can be locked in position anywhere in the 240° range of rotation in front of either wheel.



## Water Spray System

Your Wehmer model trimmer is fitted with a removable water delivery system which provides exactly the right amount of water to each grinding wheel. Proper flow of water is essential to removing grinding debris and slurry from the surface of the wheel as you're grinding your models. The two major components are the spray tube and the flow regulator. The spray tube is inside the front housing of the machine and has 12 holes (10 coarse side, 2 fine side) which deliver water to the wheels. If you start to get plaster build-up on your wheels, some of these holes are probably clogged by sediment from your water supply, and they need to be cleaned (detailed instructions on Page 8). The flow regulator is the brass fitting in the water supply line on the side of the trimmer. It has a stem and handle sticking out of the top. This is NOT an on- off valve. It is a device that controls the amount of water that hits the wheels, and is factory preset. It should only be adjusted if water flow doesn't meet the needs of the user.

## Electric Water Valve - *OPTIONAL*

This solenoid device is attached to your water supply line and to the electrical connections of the drive motor. Whenever the motor is turned "ON", the electric water valve automatically turns on the water flow. When the motor is turned "OFF", the water flow stops. It's a great convenience option for the technician.

## Clean-Out Plug

This screw-in plug #3319 is located on the front of the machine, at the bottom. It is removable by turning counterclockwise so that you can unclog the drainage cavity in the machine. If cloggage is major, the front housing may need to be removed to clear the blockage. When using the model trimmer on drain tray #1126, this plug can be left out of the hole for increased drainage capacity.

## Drain Hose

This is essentially the exhaust pipe for your model trimmer. If this tube gets clogged and blocked, you're in trouble. The drain hose should be placed on the counter to be level or run downhill. Any uphill runs will discourage proper drainage. Drain hose #3410 pulls off for cleaning.

## Tool Kit

Wehmer provides a complete set of tools for the routine maintenance of your #108 Dual Wheel trimmer. Included in your tool kit are (a) the spanner wrench for removing the grinding wheels, (b) three allen wrenches for removing the front housing and performing other disassembly procedures, (c) long thin brush for cleaning the spray tube, and (d) angled brush for cleaning the drainage area in the base of the trimmer.

## Operation

DANGER: SEVERE INJURY CAN RESULT FROM PLACING HANDS OR FINGERS TOO CLOSE TO THE GRINDING WHEELS WHILE THE MACHINE IS RUNNING!

## Safety

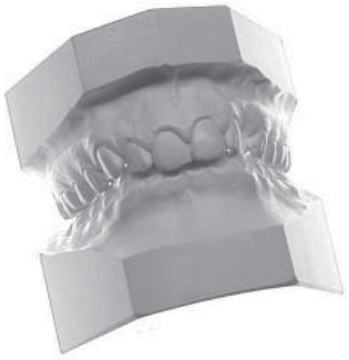
The #108 is a precision balanced and calibrated machine which provides an important and useful tool for the laboratory technician. Its quiet and smooth operation may hide the fact that this is an aggressive cutting machine that can cause harm to the operator if not used properly. Keep hands, fingers, hair, articles of clothing, and any other items that may come into contact or get entangled with the grinding wheels away from the machine when it is in operation. Furthermore -

1. Always wear eye protection when operating this machine.
2. Do not grind with dull wheels. Besides putting excess strain on your fingers, hands, and wrists, the high forces that are required to cut with a dull wheel can cause wheel failure.
Cutting with dull wheels can also overheat the motor, causing the thermal protection switch to trip.
3. The only things that should come in contact with the grinding surfaces are gypsum (plaster and stone) products. Do not use these wheels to grind metals.
4. Always turn the machine off when not in use.
5. When disassembling the machine for maintenance activities, disconnect from water and electric supply sources.
6. Do not attempt to grind materials without the trimming table locked in place.
7. Do not replace the fine wheel with a coarse wheel. The shaft and bearing assembly used to support the fine wheel were not designed for the pressures and forces of rough grinding.
8. Do not attempt to lift or move the trimmer while it is running.

### *When Changing Wheels:*

1. Check all wheels for cracks or defects before mounting.
2. Do not use wheels which have been dropped or damaged.
3. Make sure that the wheel hole fits properly on the hub. Excessive side play could indicate a damaged or worn hub that will create a dangerous operating condition.
4. Do not use excessive pressure when tightening the wheel in place. Tighten wheel nut only enough to firmly secure the wheel.
5. Always run the wheel in a protected area for one minute after installation and before grinding.
6. Do not make grinding contact with a bump or sudden impact.

## Trimming Tips



*Before you start trimming, here's a few guidelines that will help you get the most out of your trimming procedures -*

Always follow the plaster manufacturer's mix ratio for plaster and water. Consistent, measured mix ratios minimize shrinkage and maximize material strength.

Always mix your plaster or stone under vacuum, and pour while vibrating to avoid air bubbles.

When pouring your model, make sure that the bottom of the impression tray, the occlusal surface of the impression, and the bottom of the base former (or "boat") are all parallel. Otherwise you'll start off with the teeth on an angle, and you'll have to compensate by removing lots of material from the base.

Soak your models in water for 5-10 minutes. This will eliminate the heavy plaster slurry on the model and trimming table caused by the model absorbing water as you're trimming.

When using Diamond wheels, turn on the trimmer and the water flow at least one minute before starting to grind plaster. This will allow the wheels to get "conditioned" by water flow and grind to their maximum capability.

Let the wheels to do the cutting. Excessive force in pushing the model onto the wheel "squeezes out" the water from between the model and the abrasive, causing the wheel to clog - further reducing cutting capability. Excessive force also slows down the speed of the motor, reducing its efficiency and creating premature wear on mechanical components. If you need to really lean on your wheel, it's time to replace it.

You'll achieve your best results and finish by moving the model back and forth across the wheel as you're grinding, and by using gentle, but firm pressure.

## Trimming Technique

### Upper Model

*Before beginning to trim, occlude the upper and lower models with the wax bite in place, and check the relationship of the last molars to each other. If the molars of the lower model extend significantly further than the molars of the upper model, add the distance of the extension to the 5mm distance in step 3. Also, if any plaster interferes with the models fully occluding, remove it at this time with a lab knife.*



Step 1 Mark a light pencil line down the midline suture of the model for reference. Coarse trim the heel of upper model enough to square it to the midline.



Step 2 Occlude the upper model on rubber pad of squaring tool and take a swipe with the coarse wheel to establish a flat surface on the base parallel to the plane of occlusion. Thickness of the model from base to occlusal surfaces should be about 38 mm (1 1/2"). If it's larger, occlude the model to the squaring tool and reduce base to proper size.



Step 3 Place the freshly trimmed base on the trimming table and trim the heel of the model parallel to an imaginary line running between the distal surfaces of the last molars and perpendicular to your midline pencil mark. Make this cut to within 5 mm (3/16") from the last teeth in the arch.



Step 4 Trim away any excess material around the periphery of the base at this time. Trim to within 12mm (1/2") from the buccal surfaces of the teeth.



Step 5 With the heel of the model against the angulation tool, trim the front of the model 25 degrees to the left and right to meet at the anterior midline, approximately 7mm from the teeth. Remember, it is important that on all trimming procedures, anatomy extensions should be equidistant around the entire arch for both models!

Step 6 Now, set the angulation tool to 65 degrees and trim the right and left sides of the model to within 7 mm of the teeth.



**Lower Model**

Step 7 Rough-trim excess material around periphery of model, including flattening of the heel parallel to distal surface of the last molars.



Step 8 Occlude the lower with the upper model using the wax bite, and trim the bottom of the lower base to a total thickness of 3” for the two models.



Step 9 With wax bite in place, trim backs of model parallel until wheel just makes contact with the heel of the upper model. If wax protrudes past last molars, trim away with lab knife before grinding to avoid clogging of the wheel.



Step 10 With models still occluded, trim heel corners to 115 degrees.



Step 11 Now, set the angulation tool at 55 degrees and trim the right and left hand sides of the model, maintaining the same amount of anatomy extension as on the upper model.



Step 12 Place the heel of the lower model against the unlocked angulation tool and trim a 3-3 cuspid roll to about 7 mm from the anterior teeth.



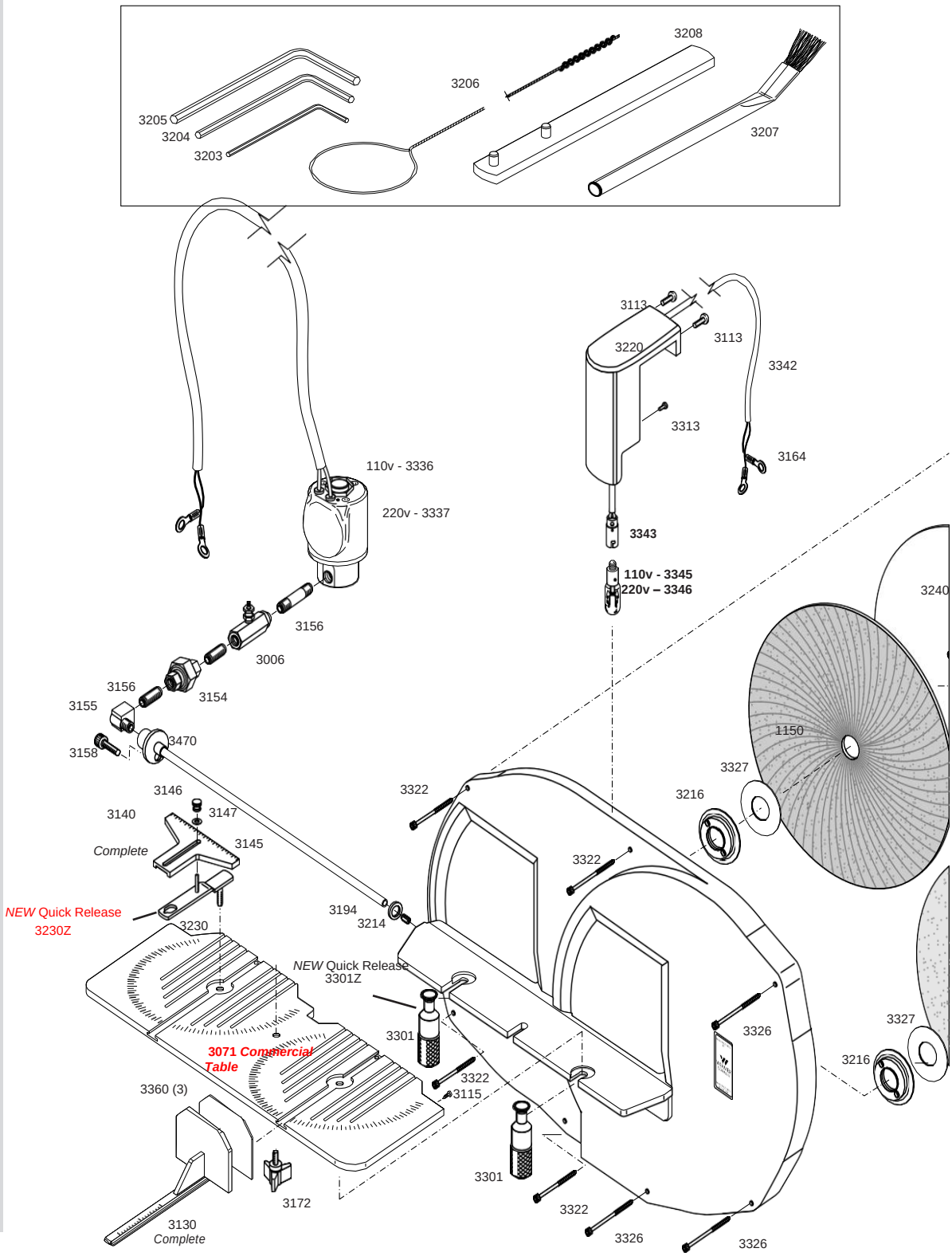
Step 13 Lightly touch all trimmed surfaces of both models on the fine wheel until heavy scratches are removed.

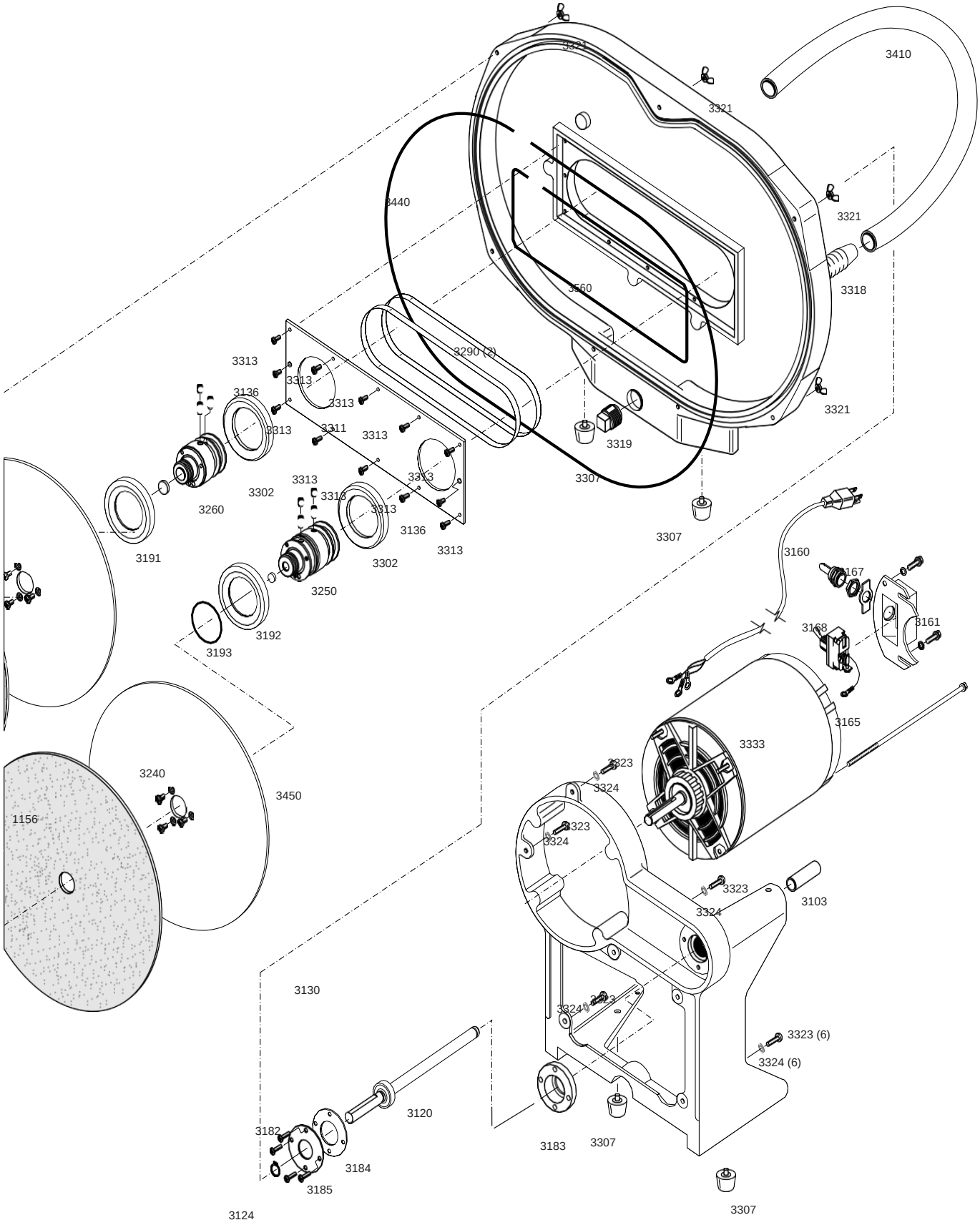


Step 14 All art work, sculpting, and repairs can now be done prior to soaping and finishing the completed models.

# 108 Trimmer Parts

| | |
|---|---|
| 3103 | Sleeve Bearing |
| 3113 | Screw, 10-32 |
| 3115 | Drive Screw |
| 3120 | Shaft w/ Bearing |
| 3123 | Fiber Washer |
| 3124 | External Retainer Ring |
| 3130 | Squaring Tool |
| 3136 | Screw, 4-40 FH |
| 3145 | Angulation Square |
| 3146 | Angulation Guide Nut |
| 3147 | Brass Washer #8 |
| 3153 | Flow Regulator |
| 3154 | Pipe Union |
| 3155 | Elbow |
| 3156 | Nipple, 3/4” |
| 3156 | Nipple, 3/4” |
| 3157 | Nipple, 1-1/2” |
| 3158 | Spray Tube Screw |
| 3160 | Power Cord |
| 3164 | Lug Connector |
| 3165 | Jumper Wire |
| 3167 | Switch Protector |
| 3168 | Switch, 110/220v |
| 3170 | Trimming Table w/ Knob |
| 3172 | Trimming Table Knob only |
| 3181 | Rubber Washer |
| 3182 | Bearing Retainer Plate |
| 3183 | Bearing Mount |
| 3184 | Washer |
| 3185 | Screw |
| 3187 | Rubber Strip |
| 3191 | Slinger, Left |
| 3192 | Slinger. Right |
| 3193 | O Ring |
| 3194 | O Ring |
| 3203 | Allen Wrench, 1/8 |
| 3204 | Allen Wrench, 5/32 |
| 3205 | Allen Wrench, 3/16 |
| 3206 | Long Brush |
| 3207 | Angled Brush |
| 3208 | Spanner Wrench |
| 3212 | Rubber Plug |
| 3213 | Rubber Plug |
| 3214 | Set Screw, SS |
| 3215 | Screws |
| 3216 | Wheel Nut |
| 3217 | Hub, Fine Wheel |
| 3218 | Hub, Coarse Wheel |
| 3219 | Flow Adjusting Tool |
| 3230 | Lower Angulation Lever |
| 3240 | Back-up Plate w/screws |
| 3290 | Drive Belts (2) |
| 3301 | Angulation Tool Locking Knob |
| 3302 | Rubber Retainer Seal |
| 3304 | Screw |
| 3307 | Rubber Foot |
| 3311 | Belt Housing Plate |
| 3313 | Screw, 4-40 PH |
| 3316 | Plastic Shim |
| 3318 | Drain Nipple |
| 3319 | Clean-out Plug |
| 3321 | Wing Nut |
| 3322 | Housing Screw, Short |
| 3323 | Screw |
| 3324 | Washer |
| 3326 | Housing Screw, Long |
| 3331 | Motor, 1/2 HP, 110v |
| 3333 | Motor, 3/4 HP, 110/220v |
| 3336 | Water Solenoid 110V |
| 3337 | Water Solenoid 220V |
| 3342 | Lamp Cord |
| 3343 | Lamp Socket |
| 3345 | Bulb, 110v |
| 3346 | Bulb, 220v |
| 3360 | Squaring Tool Pads (3) |
| 3410 | Drain Hose, 3’ |
| 3440 | Housing Gasket |
| 3470 | Spray Tube w/ Flange |
| 3560 | Belt Housing Gasket |




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## Preventive Maintenance

*Here's a few basic guidelines that will keep your trimmer in top shape. Follow them and you'll significantly extend the life of your investment.*

**1. Let your trimmer run after trimming!** - After trimming your last model, allow the unit to run with the water flow turned on for at least two minutes. This will flush out plaster residue and keep the inside of the housings clean.

**2. Clean your tools!** - When your trimming day is done, remove and clean your trimming table and tools. Plaster that dries will cause wear on the threads of the angulation tool and knobs as well as cause chemical deterioration of the table. Remember to clean off the sill on which the trimming table rests, as plaster in this area will effect the squareness of the table to the wheel.

**3. Keep the spray tube clean!** - Particles in your water supply can cause clogging of the tiny holes which spray water onto the wheels. Luckily, the spray tube is removable and can be cleaned. Complete instructions are on page 9.

**4. Don't trim with dull wheels!** - You won't be able to keep a flat surface, and the additional pressure needed to trim will put excess wear and tear on trimmer components (motor, bearings, shaft, etc.). In an orthodontic office laboratory, Diamond wheels should be used, since they are one sided, and last up to 8 years or more. See complete instructions on this page. When changing wheels, clean all drain areas and check for dried plaster on the back of back-up discs. Plaster residue is the #1 reason wheels run out of balance and cause vibration.

**5. Maintain threads on wheel nuts and hubs!** - When changing wheels on your trimmer, counterclockwise loosens and clockwise tightens. Use the spanner wrench supplied with your machine to avoid damage to the wheel nuts. If you've lost yours, we sell replacements (#3208). Make sure the threads on your hubs are free of plaster before remounting the wheel nut. Nuts should thread back on easily, with only finger pressure. Use the wrench and a hammer for final tightening only.

**6. Keep the housing gasket and mating surfaces clean!** - Whenever you disassemble your trimmer, make sure that no bits of plaster stick to the gasket. Also check the mating surface on the front housing, cleaning with a wire brush when necessary. When the gasket begins to leak - replace it (#3340). Thoroughly clean out the gasket groove with a wire brush prior to installing the new rubber seal.

**7. Keep an eye on the water level in the housing!** (Wheels sloshing in water) - Excessive water build-up - caused by insufficient drainage or too much water flow - can cause all sorts of problems to your trimmer. Drive belts can get wet and stretched, water can flow by the slingers to the motor and\or bearing assembly, and plaster residue can get on the hubs causing premature wear of the v-belt grooves. Keep the drain open and flowing. When using a diamond wheel, the amount of debris generated during grinding is significantly increased and requires additional water flow to keep the wheel clean. This extra plaster must be removed from the drain area to prevent clogging and water backup. A great solution is to use the Wehmer Drain Tray #1126, and to remove the clean-out plug, drain hose, and drain hose nipple - allowing free flow directly into the tray from two openings.

**8. Lubricate the Fine Wheel Bearing!** - On the back of the machine, directly behind the fine wheel, is a round tapered section of the trimmer housing with a hole in it. This is an oil hole, and you should lubricate the bearing that is beneath this hole every six months with a few drops of SAE 10 weight , or another light weight lubricating oil.



## Changing the Grinding Wheels

*Disassemble and check your Diamond grinding. By checking your wheels every year, it allows for routine maintenance of the drainage area, and for removal of chunks of plaster that interfere with efficient drainage.*

1. Unplug your machine, turn off the water supply, and disconnect the plumbing at the machine by unscrewing the pipe union #3154.
2. Remove the work table and all tools. Remove the work light and safety shield (if installed).
3. Undo the seven (7) housing screws and wing nuts and take off the front housing/cover.
4. Remove the fine wheel first, using the spanner wrench #3208. Make sure that threads on each hub are clean of plaster before trying to turn off the wheel nut. Use a wire brush if needed. Place the pins of the spanner in the holes of the wheel nut, hold the wrench in place with one hand over the wheel nut, and give the handle of the wrench a sharp blow with a hammer (counterclockwise to remove). Also remove the plastic spacer between the nut and the wheel.
5. Remove the fine wheel back-up plate. Both back-up plates are secured in place with three (3) machine screws size 8-32 x 1/4". Once these screws are removed , the back-up plate should pull off easily. If it does not, apply some penetrating oil around the center hole, and at the union between the plate and the hub. Pull outward from the top edge of the plate, rotating 1/8 - 1/4 turn per each pull. Repeat until plate is free. DO NOT strike the back-up plate with a hammer, as it may become damaged and not spin smoothly when the machine is re-assembled.
6. Repeat steps 4 and 5 for the coarse wheel, removing both the wheel and the back-up plate.
7. Clean both back-up plates on both sides, scraping off any plaster build-up which could interfere with the balance of the wheel. Also clean the mating surfaces on the wheel mounting hub.
8. Replace the coarse wheel back-up plate and install the new coarse wheel.
9. Replace the fine wheel back-up plate and install the new fine wheel.
10. Check the front/rear housing gasket. If it is not soft and pliable, or has flattened out, it should be replaced (part #3440). Make sure the gasket is free from plaster residue, and that the mating surface of the front housing is also clean. Any bits of dried plaster could cause leakage after the machine is reassembled.
11. Re-install the front housing and secure with housing screws.
12. Connect water supply connections, plug in your trimmer, and allow to run for 5 minutes. Check for smooth operation of wheels, and for any water leaks.

When installing a new fine wheel, it may be necessary to "dress" the surface of the wheel to remove loose abrasive particles that can transfer a gray grit to finished plaster models. A silicon carbide dressing stone #3344 can be purchased if required.

## Spray Tube Removal and Cleaning

*The spray tube is an important part of your trimming system. Uniform water flow makes trimming easier by creating a liquid layer between the model and the wheel. Proper water flow assures flushing of plaster debris and minimizes the potential for clogging of the drain. If plaster begins to build up on wheel surfaces, it indicates that the spray tube requires maintenance.*

1. Unplug your trimmer from the electric supply source.



2. Shut off the incoming water supply line and disconnect at the pipe union #3154 (large nut in water supply/ spray tube assembly).
3. Remove trimming table, tools, and tool locking nuts from your machine.
4. Locate the spray tube assembly (lower left hand side of machine). At the point of tube entry into the housing, there is a round flange. At the bottom of this flange is the spray tube locking screw (Allen Head Cap Screw #3158).
5. Remove this locking screw with a 3/16" Allen wrench.
6. Apply a twisting motion to the spray tube at the 90º elbow to break free any plaster residue that may be binding the tube inside the housing. Pull the spray tube out of the housing. If tube cannot be removed freely, proceed to step 7.
7. Remove front housing by disengaging the seven (7) housing screws and wing nuts.
8. Remove all plaster in the spray tube cavity by scraping with a putty knife. If spray tube is still in place, chip away any plaster which is preventing its removal.

If installing a new spray tube, insert assembly at this point and reassemble trimmer.

9. After the spray tube assembly is removed, clean the tube portion by lightly sanding with 100 grit sandpaper. This will allow you to locate the position of all twelve (12) water spray holes (10 for the coarse wheel, 2 for the fine wheel).

*Pay particular attention to the two holes for the fine wheel. The first hole is 1/2" from the end of the tube and points straight up (parallel to the wheel). The second hole is 2 1/4" from the end of the tube and points straight in (perpendicular to the wheel).*

10. Remove the Allen Head set screw in the end of the tube with a 1/8" Allen wrench.
11. Clean out all twelve holes by hand with a #65 drill (.035"), flushing water through the tube while cleaning.
12. Use the long thin brush supplied with your trimmer to clean inside of spray tube. Continue flushing with water while brushing, as any particles left in the tube will immediately clog your spray holes upon re-assembly.
13. Replace the set screw in the end of the tube. Do not overtighten - it can cause this tube to crack!
14. Reassemble spray tube to the front housing, and put your machine back together again.

*Before remounting the front housing, check the integrity of the housing gasket seal. Also, scrape and clean the inside front housing surface which mates to the gasket seal, making sure that there is no plaster residue to cause leaks. If you replace the housing gasket seal, make sure you also clean out the groove in which the seal seats.*

15. Reconnect the water supply and adjust flow regulator so that both wheels are sufficiently wet, and a backsplash/ misting occurs on the coarse wheel side as far back as the front housing sill.

### *Troubleshooting Tips*

*Here's a few potentially occurring problems and solutions offered by our expert Technician – Steve Vasquez :*

| | |
|---|---|
| **Plaster build-up on the wheel** | |
| Lack of sufficient water flow | Clean spray tube\adjust flow regulator. |
| **Wheels vibrate** | |
| Plaster on back of back-up plate | Remove and scrape back-up plate. |
| Worn wheel center \ Worn hub | Install new grinding wheels (#1150/1156) and/or replace hub (#3250/3260). |
| Back-up disc worn or warped | Replace back-up disc (part #3240). |
| **Water build-up in housings (grinding wheels "sloshing")** | |
| Drain Hose clogged | Remove drain hose and clean. |
| Blockage in drain cavity | Remove clean-out plug and/or front housing. Clean drain cavity. |
| Excessive water flow | Adjust flow regulator. |
| Insufficient water flow | Adjust flow regulator \ Clean spray tube. |
| **Trimmer leaks water** | |
| Housing gasket worn | Replace housing gasket #3440. |
| Plaster debris on gasket or mating surface | Clean gasket and mating surfaces. |
| Improperly tightened housing screws | Retighten housing screws evenly. |
| **Excessive grinding pressure required** | |
| Worn Wheels | Change/Replace wheels. |
| **Motor stops running** | Check circuit breaker in electrical panel.<br>Push red reset button on back of motor (thermal protection switch). |
| **Can't undo wheel nut** | |
| Threads on hub blocked with plaster | Clean threads with wire brush. |
| Wheel has swelled from absorbing water | Break off wheel and securely hold back-up plate while striking spanner with hammer. |
| **Locking knobs keep stripping** | Remove Trimming Table and install knobs in slots between table and sill. |
| **Fine wheel stops or slows** | Drive Belts are worn or stretched. Replace Drive Belts ( part # 3290). |

# Trimmer Accessories

## *WEHMER* Diamond Trimming Wheels





The most significant upgrade you can make to your model trimmer!

Natural Diamond Abrasive with Epoxy-Glass backing. 3/16" thickness.

12" Coarse 1150
12" Fine 1156

Natural Diamond Abrasive with powder coated steel backing 3/16" thickness.

12" Coarse 1154
12" Fine 115




Commercial-grade Trimming Table
Perfect for the high-volume professional lab.

This table is precision CNC-machined and hard anodized for a long service life. Shipped with mounting knob. #3071



Splash Guard / Dual

Shatterproof polycarbonate keeps debris and water out of your face. Shield removes easily for cleaning and can be moved between coarse and fine wheel. Dual Splash Guard #3500



Extra Shield

Add an extra shield to the #3500 for full coverage of both coarse and fine wheels.
Shield w/ clamp #3520
Replacement Shield only #3502



Electric Water Control

Automatically turns water on and off with trimmer power switch.
Dual 110V 3336
Dual 220V 3337



Water Sprayer
Keep your trimming table and wheels clean with this convenient sprayer. Comes with all connections and flow regulator. #3010



Work Light
Provides added illumination at the work area. Turns on and off with main power switch of trimmer.
Dual 110V 3390
Dual 220V 3400

## Plaster Traps & Accessories



Aluminum Plaster Trap for permanent installation. 2.5 GAL capacity w/ replace- able vinyl liners. Convenient sight gauge indicates sediment level. 16410

Vinyl Liners (6) 16411

Gasket 16412



Disposable Traps make clean-up a snap. Slip-fit flex hoses are leak proof, easy to change, and are included with each complete kit.
Complete Kit 3 GAL 16406
Replacement Bucket 3 GAL 16407
Complete Kit 5 16408
Replacement Bucket 5 GAL 16409



Flex Hose Adapters for Aluminum Trap
Flex Hose to Trap
1-1/2 x 1-1/4 16426
Flex Hose to
1-1/4 x 1-1/4 16427



Flex Hose Kit
1-1/4" #16428



Backflow Protector
In-line check valve for all trimmers. 1/8" NPT female stainless steel fitting. #3014

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