



WEHMER Dual Wheel Model Trimmer

Model #108 Operator's Manual and Trimming Guide



This manual describes operating procedures for the following models:

108
108P
108PFLE

Product Specifications

Motor

108/110	1/2 HP, 110-120 volts, 60 Hz, 7.9A 1725 RPM
108x/220	3/4 HP, 210-230 volts, 50 Hz, 6.5 A 1425 RPM
108P/110	3/4 HP, 110-120 volts, 60 Hz, 11.9A 1725 RPM
108P/220	3/4 HP, 210-230 volts, 50 Hz, 6.5A 1425 RPM

All motors are Split Phase, Thermally Protected, Moisture Resistant

Wheel 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 108 66 lbs \ 30kg 108P 73 lbs \ 33.2 kg



Includes:

Installation Instructions
Component Overview
Model Trimming Guidelines
Parts Diagram and List
Preventive Maintenance
Troubleshooting Tips
Available Accessories
Warranty Information
Loaner Policy
Factory Service

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 and fine cutting 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.

Standard 108 models are fitted with 1/2 HP motors for excellent trimming performance. 108P models feature our upgraded 3/4 HP motor 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

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 provided 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 splash-back 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. Standard table #3170 has a mylar laminate for ease of use. 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 Angulation 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 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 on 108, standard on 108P)

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 clogage 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.

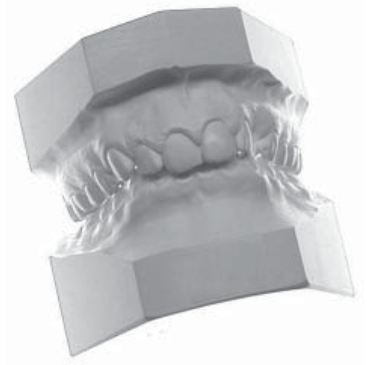
When pouring your model, make sure that the bottom of the impression tray, the occlusal surface of the impression, and the bottom of the base former (or "boat") are all parallel. Otherwise you'll start off with the teeth on an angle, and you'll have to compensate by removing lots of material from the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

If using stone 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 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.

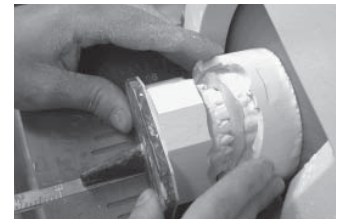
Step 10 With models still occluded, trim heel corners to 115 degrees.

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.

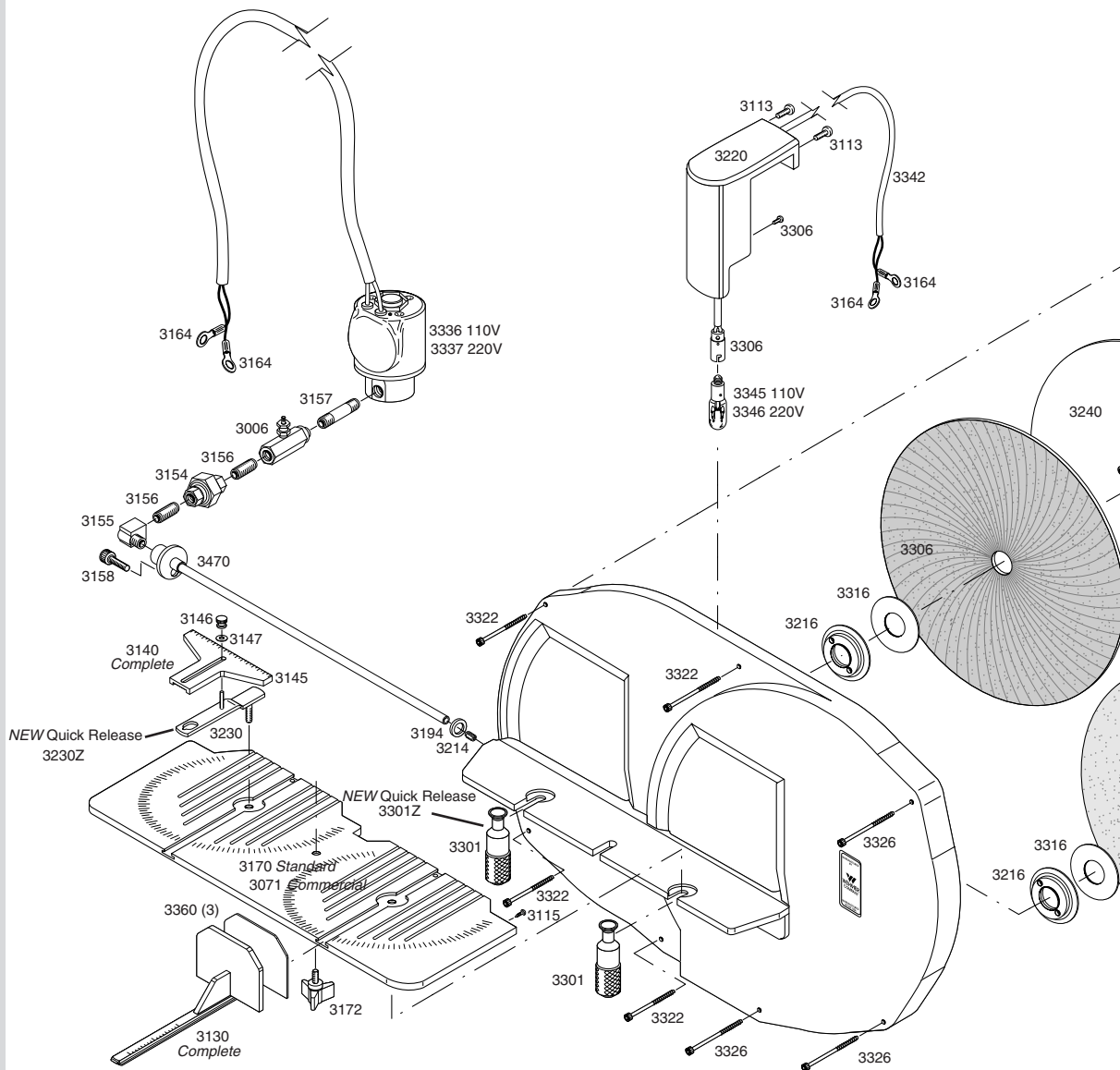
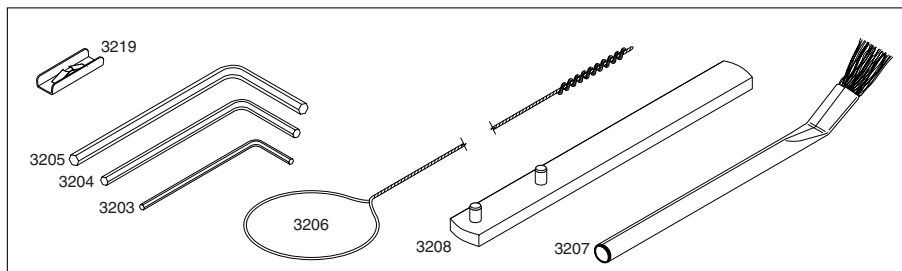
Step 13 Lightly touch all trimmed surfaces of both models on the fine wheel until heavy scratches are removed.

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



108 Trimmer Parts

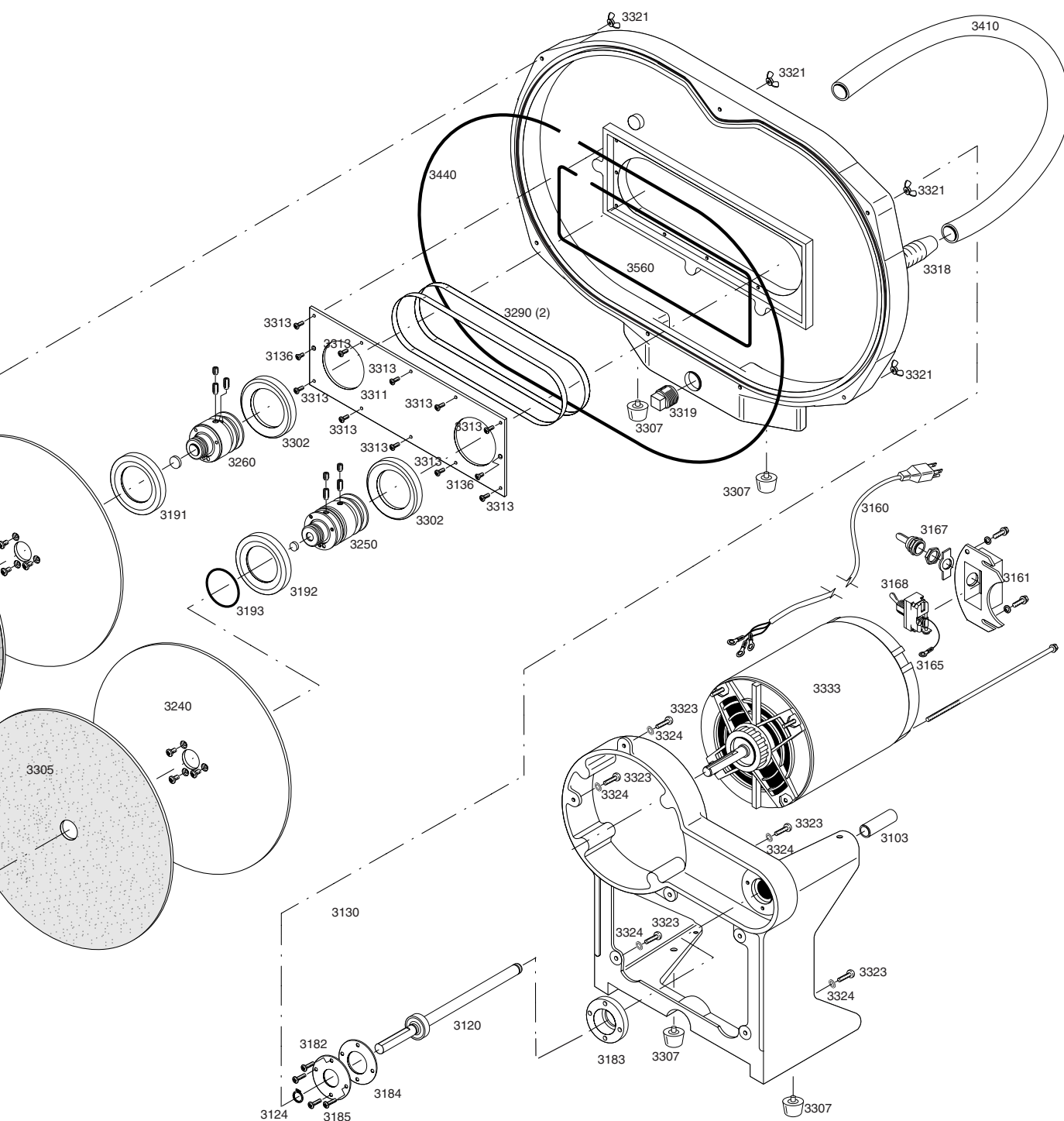
3103	Sleeve Bearing
3113	Screw, 10-32
3115	Drive Screw
3120	Shaft w/ Bearing
3123	Fiber Washer
3124	External Retainer Ring
3130	Squaring Tool
3136	Screw, 4-40 FH
3145	Angulation Square
3146	Angulation Guide Nut
3147	Brass Washer #8
3153	Flow Regulator
3154	Pipe Union
3155	Elbow
3156	Nipple, 3/4"
3156	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
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	Set Screw
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
3305	Fine Wheel, Carborundum
3306	Coarse Wheel, Carborundum
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



Trimmer Parts Kits

3140	Angulation Tool Complete
3230	Angulation Tool - Lower Only
3240	Back-up Plate w/screws
3430	Belt Cover Plate and screws
3420	Cartons & Packaging 108
3410	Drain Hose (3')
3344	Dressing Stone
3290	Drive Belts/108 (2)
3006	Flow Regulator / Needle Valve

3270	Housing Screws and Nuts
3250	Hub - Fine Wheel
3260	Hub - Coarse Wheel
3162	Power Cord/ 6' with three-prong plug
3300	Retainer Seals (2)
3120	Shaft and Bearing Assembly / 108
3190	Slinger Kit / R & L with O-ring / 108
3370	Spray Tube Assembly
3130	Squaring Tool
3360	Squaring Tool Pads (3)



- 3330 Switch Assembly w/ housing
- 3200 Tool Kit w/ allen wrenches, spanner, and brushes
- 3071 Trimming Table/ Commercial Grade w/knob
- 3170 Trimming Table Standard w/knob
- 3890 Water Line Connection Kit 2' x .250 "x .170"
- 3336 Water Valve/ Electric/ 110V
- 3337 Water Valve/ Electric/ 220V
- 3329 Water Valve Wrench (ASCO)
- 3380 Wheel Nut Kit / (2 w/ shims)
- 3390 Work Light/ 110V
- 3400 Work Light/ 220V

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, silicon carbide wheels should be flipped at least every 6 months and changed once a year. 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 carborundum grinding wheels every 6 months. If the wheels are clogged or worn, they can be flipped to the other side for additional wear. Once the wheel is noticeably worn, or warped from absorbing water,

it is not recommended that the wheel is flipped. Checking your wheels every six months also 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.

When replacing wheels, consider diamond wheels from Wehmer available in coarse and fine grit.

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 90° 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 over-tighten - 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 service department:

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 (#3306/3305) 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.

Elevate machine 1-2" (can be done with wooden blocks or #1126 Drain Tray).

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

Flip or change wheels.

Motor stops running

Check circuit breaker in electrical panel.

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.

Trimming table not square to wheel

Plaster Build-up under trimming table

Remove table and scrape plaster build-up from sill.

Trimming Table has swelled or warped

Replace Trimming Table (part #3170).

Locking knobs keep stripping

Knobs are improperly installed

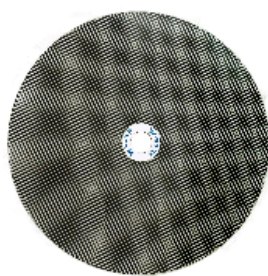
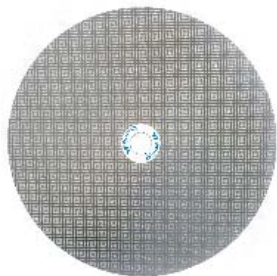
Remove Trimming Table and install knobs in slots between table and sill.

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
w/ Epoxy-Glass backing.
3/16" thickness.

12" Coarse 1150
12" Fine 1156

Natural Diamond Abrasive
w/ powder coated steel back-
ing. 3/16" thickness.

12" Coarse 1154
12" Fine 1155
10" Coarse 1152



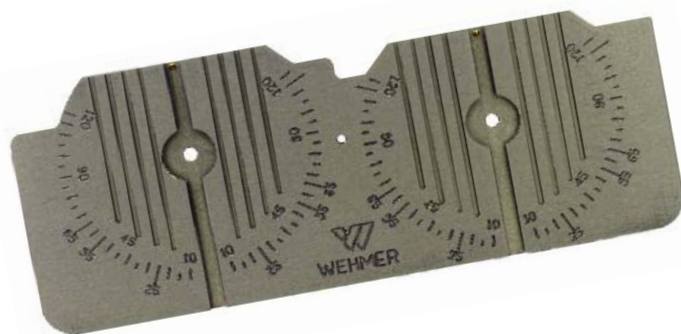
Dual Trimmer Drain Tray

Elevates the dual trimmer less than 2" while significantly enhancing drainage capability and containing splash and splatter. Great with diamond wheels. 1126



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



Commercial-grade Trimming Table

Perfect for the high-volume professional lab. Thicker than our standard table, this item is precision CNC-machined and hard anodized for a long service life. Shipped with mounting knob. 3071



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/ replaceable 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 leakproof, easy to change, and are included with each complete kit.

Complete Kit 3 GAL 16406
Replacement Bucket 3 GAL 16407
Complete Kit 5 GAL 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 Plumbing
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

Genuine **WEHMER** Parts



3306 12" Coarse
3305 12" Fine
Carborundum Trimming Wheels



3240
Back-up Disc



3208
Spanner Wrench



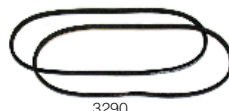
3260
Coarse Wheel Hub



3250
Fine Wheel Hub



3216 Wheel Nut
3316 Plastic Shim



3290
Drive Belts (2)



3180
Bearing Mount Kit



3120
Shaft & Bearing



3430
Belt Cover Plate Kit



3440
Housing Gasket



3270
Housing Screw Kit



3300
Retainer Seals (2)



3190
Slinger Kit
R & L plus "O" Ring

ZIGLok Quick Release Angulation Tool

Now... a quick and easy way to place and remove your angulation tool. Just tilt the knob and slide onto the locking stud. Then straighten and tighten with just one turn. This innovative assembly makes switching between trimming tools a snap!



3140Z ZIGLok Angulation Tool 3301Z ZIGLok Locking Knob

Trimming Tables & Tools



3170 Standard Trimming Table w/ knob



3071 Commercial Trimming Table w/ knob



3301
Angulation Tool
Locking Knob



3130
Squaring Tool

3360
Squaring Tool Pads (3)



3140
Angulation Tool Complete



3350
Angulation Tool
Upper Only



3172
Trimming Table
Locking Knob



3230
Angulation Tool
Lower Only

Water System



3319
Clean Out Plug



3890
Water Line Kit 2'



3318
Drain Nipple



3410
Drain Hose 3'



3006
Flow Regulator



3154
Pipe Union



3370
Spray Tube



3156
Short Nipple



3155
Spray Tube Elbow



3157
Long Nipple

Complete parts diagrams and instructions for installing these replacement parts are available from Wehmer Customer Service. Just call, fax, or e-mail and we can provide step-by-step guides for your staff or repair technician. Easy.

Electrical Components



3333
Motor 3/4 HP
110/220V - 50/60 Hz



3330
Switch w/ Housing



3162
Power Cord



Work Light Bulb
3345 110V
3346 220V

**800-323-0229 / help@wehmer.com
www.wehmer.com**

Warranty

The Wehmer Dual Wheel Model Trimmer you have purchased is guaranteed to be free from defects in materials and workmanship for one year from date of purchase. Warranty assumes that this equipment is used within the parameters of its intended purpose and is not misused, abused, or modified. All warranty claims and adjustments will be made at the factory by Wehmer factory service technicians unless other arrangements have been made.

Loaner Policy

The Wehmer Service Department maintains a limited stock of loaner equipment which is available to any Wehmer customer for a fee while their machine is being serviced or overhauled at our factory. This fee includes shipping of the loaner to and from your place of business. Shipping costs associated with the customers' unit are the responsibility of the customer. Because we have only a limited number of loaners, we request that you return these machines promptly so that your colleagues may also have an opportunity to take advantage of this convenient service.

Wehmer Factory Service

All Wehmer equipment is built in the USA and is backed by an expert team of qualified mechanics who can service, repair and overhaul your model trimmer. Our service department is equipped with all of the materials, equipment, and expertise necessary to keep your Wehmer products up to new-machine standards. We maintain a complete stock of spare parts, and can assist you by answering any questions regarding the care and maintenance of your machine. Call Wehmer Customer Service at **1-800-323-0229**. Maintenance guidelines for a variety of procedures can also be viewed at our website -www.wehmer.com.

Returning Your Trimmer to the Factory

Your Wehmer Dual Wheel Model trimmer is a ruggedly built machine, designed to take the wear and tear of high production applications for years of reliable use. It is not, however, able to withstand the rigors of travel unless carefully packaged for shipment. If you've received a loaner from us, simply use the loaner packaging to return your unit for evaluation and repair. If you're not in possession of our loaner, please follow these guidelines:

- A) Find a double- or triple-wall carton of sufficient size to allow cushioning material of at least 6" to be placed around the entire machine, including the ends. The Wehmer Corporation can provide original shipping materials at our cost.
- B) Place cushioning material on bottom of box, and position your machine in the middle. Pack cushioning material around the entire machine so that the trimmer cannot shift inside the box. Foam chips or "peanuts" are not desirable for your trimmer, as the machine will easily displace this material and shift to the outside edges of the container.
- C) Securely tape the package and put your return address on the outside of the carton.
- D) Mark package, "**Attention: REPAIR DEPARTMENT.**" Ship via UPS when possible, and insure for new replacement value.
- E) Ship to:

The **WEHMER** Corporation
1151 N. Main Street
Lombard, IL 60148 USA

800-323-0229 / p. 630-424-1877/ f. 630-424-1898 / help@wehmer.com

We appreciate your business!