INSTRUCTION MANUAL AND PARTS LIST
MODEL TRADEMASTER – SECTION I

DAKE/PARMA

WHEN ORDERING PARTS

GIVE COMPLETE SERIAL NUMBER OF MACHINE
GIVE PART NUMBER AND NAME
GIVE AMOUNT REQUIRED

Unless the above data is included we cannot fill your order.

MODEL: ________________________________

SERIAL NUMBER: _______________________

DATE PURCHASED: ___________________

DAKE Division of JSJ
724 Robbins Road
Grand Haven, MI 49417

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## Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>988070 / 988071</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blade Width</td>
<td>1/8 – 1 inch</td>
</tr>
<tr>
<td>Blade Length</td>
<td>150 inches</td>
</tr>
<tr>
<td>Blade Speed</td>
<td>50 to 500 infinitely variable</td>
</tr>
<tr>
<td>Band Wheels</td>
<td>2</td>
</tr>
<tr>
<td>Tire Type</td>
<td>Crown type tires</td>
</tr>
<tr>
<td>Band Wheel Size</td>
<td>20 inches</td>
</tr>
<tr>
<td>Horsepower</td>
<td>1-1/2 h.p.</td>
</tr>
<tr>
<td>Throat Size (band to column)</td>
<td>19-1/2 inches</td>
</tr>
<tr>
<td>Roller Guides</td>
<td>Heat treated roller blade guides</td>
</tr>
<tr>
<td>Maximum work height</td>
<td>12 inches</td>
</tr>
<tr>
<td>Worktable Dimensions</td>
<td>24 x 24 inches</td>
</tr>
<tr>
<td>Worktable Tilt</td>
<td>10° left / 45° right</td>
</tr>
<tr>
<td>Table Travel</td>
<td>11 inches front to back</td>
</tr>
<tr>
<td>Table Travel Action</td>
<td>Foot control and lock</td>
</tr>
<tr>
<td>Worktable Height</td>
<td>41 inches</td>
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<tr>
<td>Machine Height</td>
<td>80 inches</td>
</tr>
<tr>
<td>Machine Floor Space</td>
<td>40 x 32 inches</td>
</tr>
<tr>
<td>Weight</td>
<td>1050 pounds</td>
</tr>
<tr>
<td>Blade Welder, Optional</td>
<td>1 inch</td>
</tr>
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</table>

## Features

- Power feed table with adjustable feed pressure up to 60 lbs. Simple design is maintenance free.
- Heavy duty welded steel base and frame.
- Precision ground cast iron work table.
- Heat treated blade guides.
- Variable speed range from 50 to 500 fpm with clearly visible speed indicator.
- Tilting table combined with power feed makes compound angle possible.
- Safety shielded with over blade protection, right down to the work piece.
IMPORTANT SAFETY INSTRUCTIONS

Warning: Failure to follow the following safety precautions may result in serious injury.

KEEP WORK AREAS CLEAN. Cluttered benches and workstations invite accidents and create potential fire hazards. Floors must be kept clean and free from oil, wax, sawdust or other debris. Promote cleanliness and reduce accidents and fire hazards.

CONSIDER WORK AREA ENVIRONMENT. Keep alert to potential hazards in the work environment. Do not use electrical machinery in damp or wet locations. Keep machinery clear of the presence of highly combustible materials, dust, flammable liquids, fumes, vapors and gases.

WEAR PROPER APPAREL. Do not wear loose fitting clothing, gloves, neckties or jewelry. They can be caught in moving parts. Non-skid footwear is recommended. Wear eye, face, ear, respiratory and body protection equipment appropriate for operating environment. Wear protective hair covering to contain long hair. Roll long sleeves up above elbows when operating the saw.

USE SAFETY GLASSES. Eye protection is required at all times when using this machine.

DON'T ABUSE POWER CORD. Keep cord from heat, oil and sharp edges.

DON'T FORCE TOOLS. Machinery performance will remain at higher and safer levels if it is not pushed beyond the limits of its capability.

SECURE ALL WORK. Use clamps, vices, fixtures or jigs to hold work when it's practical. It's safer than using your hands and it frees both of your hands to operate the machine. Use a push block to hold or guide work when working close to the cutting tool.

DON'T OVERREACH. Keep all hands well away from moving parts; saw blades and other cutting tools. Keep proper footing and balance at all times.

MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for better and safe performance. Follow instructions for maintenance and changing accessories. Keep handles dry, clean and free from oil and grease. Damaged parts should be inspected before further use of the tool. Check alignment of all moving parts. Look for binding of moving parts, breakage, mounting and any other condition that may affect machine operation. Any part or guard that is damaged should be properly repaired or replaced prior to further use.

DISCONNECT MACHINE. Make sure machine is unplugged from it's power source before servicing and when changing accessories, such as blades.

NEVER LEAVE MACHINE RUNNING UNATTENDED. Before leaving machine, turn the power off. Do not leave the machine until it comes to a complete stop.
KEEP ALL SAFETY GUARDS IN PLACE. Be sure that all guards are in working order, positioned properly and are aligned and adjusted correctly.

CHECK EXPOSURE. Adjust the machine for minimum exposure of cutting tool necessary to perform each operation.

GROUND ALL TOOLS. Make sure wiring codes and recommended electrical connections are followed and that the machine is properly grounded.

KEEP ALL CHILDREN AND VISITORS AWAY. All visitors should be kept a safe distance from the work area. Don’t let visitors come into contact with machine or power cord. Any person visiting the work area should wear appropriate protective devices for eyes, face, ear, respiratory and body coverage as indicated for the operation or environment.

STAY ALERT. WATCH WHAT YOU ARE DOING. USE COMMON SENSE AT ALL TIMES. NEVER OPERATE ANY TOOL OR PIECE OF MACHINERY WHILE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR MEDICATION.

UNPACKING AND CHECKING CONTENTS

Carefully unpack and discard crating material. Unbolt machine from pallet and lift off. (You can lift your Trademaster saw by the upper portion of the saw using a lift truck.) Only lift in this manner with the door OPEN or damage may result.

Un-tape all doors and remove the cardboard box from the bottom of the saw base.

Install 10-pound weight on the outside counterweight bar.

Install 40-pound weight using the bolt provided on the arm inside the lower cabinet.

Install the foot pedal and speed selector knob.

Remove the protective coating from the table using a water base grease remover. CAUTION: Gasoline, naphtha, kerosene lacquer thinner, mineral spirits and other related solvents are highly flammable. Wipe thoroughly with a clean, dry cloth.

The lock for the table travel is found under the table on the table rail. Be sure to unlock it before attempting to move the table.

WARNING: For your own safety, do not connect your saw to the power source until the machine is completely assembled.

WARNING: This machine has been shipped with the table locked. Before operation the lock clamp on the right hand table rail must be loosened.
TRADEMASTER ADJUSTMENTS

A  WHEEL CANT ADJUSTMENT—Used to position blade on wheel.
B  GUIDE BAR LOCK—Used to lock roll guides into position.
C  BLADE TENSION HANDLE—Used to remove and install saw blade. Also used to set the correct blade tension—be sure blade is tight.
D  ROCKER LOCK KNOB—Used to unlock & move table to desired degree angle of cut then lock into position.
E  TABLE LOCK—Used to lock table into a fixed position.
F  VARIABLE SPEED LOCK—Unlock lock and move to the desired blade speed & relock.
H  HYDRAULIC FEED CYLINDER—Used to regulate the table feed.
Blade Selection

For Operator convenience, a blade selector chart is located inside the saw cover. It provides recommended blade speeds, required teeth per inch, and minimum cutting radius for various blade widths. The following chart can be used to select the blade needed:

**Standard Tooth Applications**

<table>
<thead>
<tr>
<th>Thickness of Material</th>
<th>Teeth per Inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1/8”</td>
<td>18 Teeth</td>
</tr>
<tr>
<td>1/8” to 1/4&quot;</td>
<td>14 Teeth</td>
</tr>
<tr>
<td>1/4&quot; to 1/2”</td>
<td>10 Teeth</td>
</tr>
<tr>
<td>1/2” to 1”</td>
<td>8 Teeth</td>
</tr>
<tr>
<td>1” to 3”</td>
<td>6 – 4 Teeth</td>
</tr>
<tr>
<td>3” to 6”</td>
<td>4-6 Teeth</td>
</tr>
<tr>
<td>6” and longer</td>
<td>3H</td>
</tr>
</tbody>
</table>

**Note:**
1) You must have at least 3 teeth into your work or blade damage will result.
2) For straight cuts, a 3/4” inch blade is best.

**Blade Speed (feet per minute)**

Refer to the blade selector chart inside the cover on your Trademaster for the appropriate speed.

**Blade Removal and Installation**

To remove the blade, release the blade tension handle. (Item C on page 6). Remove the blade.

To install the blade, place the blade over the bottom wheel, then on the top wheel. Teeth must point down toward the table. Tighten the blade tension handle enough to hold the blade firmly in place, and the push the blade into the guide inserts. Turn the machine on to allow the blade to position itself and then finish tightening the blade. IMPORTANT: Blade must be tight to insure straight cut.

**Please Note:**

The most common causes for your Trademaster not cutting straight are:
1) Blade tension is too low.
2) The blade is either dull or worn on one side.
3) The blade is upside down. The teeth must point down toward the table.
**Lubricating**

**Gear Box:** Your Trademaster gearbox is filled at the factory. Check the fluid level on arrival, and then check every six months thereafter. Use 90 weight gear lube to maintain fluid level at the fill / check pipe plug.

**Hydraulic Cylinder:** Keep the cylinder reservoir ½ to ¾ full. Use light hydraulic oil to refill.

**Oil Cup on Variable Speed Axle:** Keep full when saw is in use. 
**CAUTION:** Fill only when machine is turned off.

**Parts Installation**

Some of the components of your Trademaster bandsaw have been packed separately inside of the machine, to prevent shipping damage. Please take care when installing these components to prevent machine damage or injury.

10 lb. Counter weight: This is used to increase or decrease cutting pressure.

1. This is to be installed on the counter weight arm. The arm is located on the right hand side of the machine next to the speed control lever. Remove one of the cap screws (two screws one on front and rear of this arm). Carefully slide this counter weight onto the arm. Position it in the middle of the arm. (At the pivot point) Tighten the lock knob on the weight. Replace the cap screw. **WARNING:** Never operate the machine without these cap screws installed. The counter weight could slip off of the arm and cause injury.

2. Speed select knob: Install on the end of the speed select lever.
3. 40 lb. Weight: This gives table the gravity fed momentum.

This is hung on the inside of the cabinet (right hand side) on the weight lever arm. Carefully and safely as not to injure yourself, lift this weight and hang it from the weight lever using the pin provided.

4. Install the foot pedal pad.

Operating instructions

There are four key components that must be taken into consideration before cutting your material.

1. Blade type / pitch required for the material.
2. Speed (fpm) to appropriately cut the material.
3. Feed pressure.
4. Table feed rate

Using the chart on the inside of the upper wheel door, select the proper blade and cutting speeds. Always securely hold your material while cutting. Using either the miter gauge supplied with the machine, or a clamping device. Note: Never cut free hand unless the table is locked in the fixed position, and you are contour cutting.

Lower the guide post to approx. 1/16” – 1/8” above the material to be cut. Once the material is clamped for cutting you must set the counter weight to apply cutting pressure. This is done by loosening the lock knob and sliding the weight to the front or rear of the arm. Forward will reduce pressure but assist in the tables return. Sliding this weight to the rear will increase the feeding pressure.

The blade speed must only be adjusted with the machine running. This can be selected by moving the speed selector lever forward or backward to increase or decrease blade speed. The scale on the speed selector bracket will indicate the blade speed in feet per minute.
The feed rate of the table must be adjusted as the machine is put into motion. The design of this machine will not allow cutting faster than the blade will remove the material. If the table stalls out into the cut slow this feed rate down, or adjust the cutting pressure counter weight.

To start the table in motion the foot pedal is depressed. Keeping your foot level on the pedal (tilting the pedal toward the machine) depress the pedal and release it. This will disengage the pedal from its locked position, and set the table in motion.

Once the table is moving adjust the flow control to increase or decrease the tables feed rate. By turning the control clockwise will decrease the rate and counter clockwise will increase the rate.

Always make this adjustment when machine is running.
After the cut is complete, depress the pedal downward keeping the pedal level. This will then engage the pedal lock.
Note: The return of the table can be assisted while pushing the pedal and pushing the counter weight arm downward.

To tilt the table, loosen the table lock, and carefully tilt the table to the degree needed as marked on the scale and lock the table at this angle. ALWAYS secure the work to the table to prevent it from falling off the machine. To make compound miters, set the table
to the degree needed and the miter gauge to the angle needed. When cutting angles or compound miters, always slow the table feed down.

Notes: When bundle cutting always secure pieces together to prevent parts moving during the cutting process. When contour cutting always lock table, and use the narrowest blade possible for the application, to prevent undo stress to the blade.

**Blade tracking and guide adjustments**

When a new blade is installed blade tracking may be necessary. The blade should run as close to center of the band wheel as possible, if the blade is not centered the blade must be tracked in.

1. Tension blade to manufactures recommendations. (It is better to be over tight than not tight enough).
2. On the rear of the machine behind the upper wheel loosen the cant knob.
3. Adjust the center-tracking knob in or out to track the blade. Note: Make only half turns at a time, and jog the machine as you go to check tracking.
4. After tracking is completed tighten cant knob.

Blade guide adjustment should be done from time to time to insure the blade is being properly supported. The guides are adjustable in five different ways.

1. The roller adjustment to loosen from the blade.
2. The roller adjustment to tighten against the blade.
3. The roller adjustment in and out for blade widths.
4. The top roller in / out side to side for support of the blades back, for centering blade groove.

The blade must run straight through the guides without any twist or misalignment from the upper to the lower guides. The top roller has a shallow groove in it and the back edge of the blade is to run through this groove. The roller can be moved left or right by loosening the setscrew and shifting the roller. The top and bottom must be in line with each other. The back of the blade should just touch this roller. If it does not or is too close where it bows the blade outward it must be adjusted. By loosening the setscrew, the knurled knob can be turned to make this adjustment.

The lower rollers can be adjusted to put pressure on the blade sides. This is done by loosening the setscrews and rotating the eccentric axle. There should be approx. .004 of gap between these rollers and the blade.

If you change the blade width the lower rollers (both on upper and lower guide sets) must be adjusted accordingly. By loosening the setscrews move the rollers so they are just behind the blades teeth gullets. The roller must not contact the set of the teeth.

Note: Keep the guides clean and free from chips.
GENERAL DESCRIPTION

Note: Always wear eye protection when using this welder or grinder!

Your Dake vertical band saw is equipped with a “resistance-type” butt welder. The two clamp jaws of the welder hold the blade ends together. When the welding start knob is turned fully clockwise past the zero setting, electric current flows through the blade ends creating enough heat to soften and join them.

Note: This welder is suitable to weld
Metal blades 3 x 0.5 - 25 x 0.8mm
bi-metal blades 6 x 0.9 - 25 x 0.9mm

This welder should not be used for welding 2% and 3% tungsten-alloyed metal cutting blades or HSS blades.

The approximate values for bi-metal blades are indicated in the matrix in the next column.

Note: * The weld current step and upsetting pressure step have to be increased with some saw manufactures. The saw blade has to be metallically clean and no tooth may enter into the welding seam.

1. PREPARATION OF BLADE

Before welding the blade ends should be cleaned or rubbed with emery cloth on both sides of the blade to a length of 1”, until they are metallically clean over the enter width.

Cut the blade ends accurately and at right angles. (See graphic below) Check abutment against the stop for a cut at right angles. Proper welding can only be achieved if the blade ends are cut with out a burr and at right angles. (Also see trouble shooting section)

2. ADJUSTMENT

The initial jaw gap and upset force must be adjusted and proportioned to the cross sectional area of the blade being welded. A greater jaw gap will allow a wider or thicker blade to reach proper welding temperature. A greater upset pressure produces the same unit pressure in welding a wider or thicker blade.

Set the welding current switch (1 figure 1), upsetting pressure switch (2 figure 1) and the upsetting way switch (3 figure 1) to the blade width to be welded. In view of the wide range of material qualities and thickness scale
values are only guide values, which have been calculated for commercial blades of 0.65 mm thick. Trial welds should determine the correct settings for different steel qualities and thickness. Particularly thin blades (0.4 mm) should be welded with a short upsetting way, high current and weak upsetting pressure. Example: Blade width is 1/2”. Current switch is set to 1/2” (number 1) position. The upsetting pressure switch is set to 1/2” (number 1) position. The upsetting way switch is set to the 1/2” position.

3. CLAMPING THE BLADE ENDS

Insert the blade ends in the clamping jaws so that the joist is exactly in the center of the jaws. To protect the jaws the blades should be inserted so the teeth are aligned at the front stops. Only blades without teeth should be aligned at the rear stops. Leave slack in the blade coil, the blade must be free so it can move easily during welding.

4. WELDING

Turn the upsetting switch (3 figure 1) past the position (5 figure 1) to welding (6 fig. 1) and lock it for about 3 seconds until the welding is completed. The current is switched off automatically.

Sparks spray out during welding, therefore stand at the side of the machine.

WARNING: BLADE WILL BE HOT!

5. ANNEALING

When the blade is heated in the butt welding process, the steel at the point of the weld “air hardens” and becomes brittle. The anneal on/off knob is used to anneal the weld by reheating it. This returns the blade close to its original condition.

After welding loosen the pressure clamps (7 fig. 1) and set the jaws to the wide annealing position by turning the upsetting pressure switch (2 fig. 1) counter clockwise. Re-clamp the blade so that the weld is in the center between the jaws. Operate the annealing switch (8 fig. 1) until the weld becomes dark cherry red. This will take from 1 to 5 seconds depending on the blade width. Allow blade to cool until the blade returns to a dark color. Repeat this process at least three times. Some brittle alloys require more annealing than the standard carbon blades.

Note: It is difficult to weld and anneal bi-metal blades due to the make up of this type of blade. It will take some practice to successfully achieve a suitable weld.

WARNING: BLADE WILL BE HOT!

After annealing bend test your weld:

wrong ! wrong ! correct !

too hard too soft

6. RE-FINISHING THE WELD

Welding burr (flash) can be removed by finishing with a grinding wheel above the welder. Grind in a longitudinal direction, other wise transverse fractures may occur. The proper finish of the blade after grinding, a tempered steel-blue coloring.

Note: Do not over grind, into the blade facing. Remove any burr on the back edge of the blade.
WELDER LAYOUT AND CONTROLS

7. WELDER MAINTENANCE

If the clamping areas of the jaws are dirty or deformed so they do not clamp evenly, good welds cannot be made. Any dirt or metallic debris must be removed from the jaws. The jaws should never be filed. It should only be polished with a proper cleaning material and if absolutely necessary polished with fine emery cloth held on a flat piece of bar stock. The uniformity of current flow and contact pressure can be checked by putting the welder in the annealing position and clamping a piece of blade stock with out a weld in the jaws. When the annealing switch is turned to the heating position the blade should heat uniformly over its entire width. (See fig. 2) If the heating is not uniform the clamping devices should be checked for dirt or misalignment.

8. POOR WELDS / TROUBLE SHOOTING

If the welded seam contains holes, the upsetting pressure should be increased, the welding current reduced or both settings changed. **We must emphasize once again that proper welds cannot be made if the blade ends are not cut square, and properly cleaned.** Welding of blades may take practice, do not be discouraged if your welds are not perfect at first.

Avoid overlapping when welding thin blades. If welder does not give suitable weld, check in coming voltage to the machine. If voltage is low, use next blade size setting. Example: 220 volt machine, incoming voltage is 208 volt, to weld 1/2" blade use 5/8" settings.

If incoming voltage is high reverse this procedure.

If incoming voltage is low, the welder transformer has taps that can be set to a 10% increase or decrease. **SHOCK HAZARD! ONLY A QUALIFIED ELECTRICIAN SHOULD ATTEMPT THIS. ALWAYS CONTACT DAKE BEFORE REMOVING THE WELDER.**

If the welder does not shut off, after the welding cycle, or will not start the welding cycle, a limit switch adjustment is needed.

**THE WELDER MUST BE REMOVED FOR THIS ADJUSTMENT. SHOCK HAZARD! ALWAYS CONTACT DAKE BEFORE REMOVING THE WELDER OF MAKING INTERNAL ADJUSTMENTS. A QUALIFIED ELECTRICIAN MUST DO THESE ADJUSTMENT.**