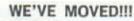
TANNEWITZ, INC. 0-794 Chicago Drive JENISON, MICHIGAN 49428

MODEL - GH SERIAL No. - 1520/

TANNEWITZ BAND SAW OPERATORS MANUAL MACHINES PRIOR TO 1973

TANNEWITZ



0-794 Chicago Drive JENISON, MICHIGAN 49428 (616) 457-5999



A high quality band sawing machine has been entrusted to your care. It has been designed and built by craftsmen who, like yourself, take pride in their product. These instructions are furnished to assure that you will get the maximum in trouble free production for which the machine was built. Read all of the operating instructions before running the machine.

The machine was thoroughly INSTALLATION: rested and inspected before packaging for shipment. Parts subject to corrosion have been coated with a rust preventer which can be easily removed with solvent. Some parts have been dis-assembled and packaged in a box within the crate to provide greater protection during shipment. It should be thoroughly emptied to assure that all the parts are found. A foundation print has been included to aid in locating the machine and anchor bolt holes for securing it to the floor where desired. A saw blade, usually shipped with each machine, will be found coiled and placed in the lower wheel chamber. After the moving parts of the machine, such as the guide post, table tilting mechanism, and the upper ways have been cleaned, they should be wiped with oil and run through a full movement to assure that they will operate prop-Note that the guide post and table tilting mechanism have locks.

If the machine is a V-belt drive type, the motor assembly may be in a separate crate. The motor assembly will have already been fitted and bracketed to the machine. The motor should come in alignment automatically. The motor usually is connected with a slotted adjustment for proper installation and take-up of the belts. Care should be taken in installing the V-belts. They must be applied by hand, running one belt on at a time and properly tensioned after they have all been applied. If it is suspected that the pulleys are not in alignment, a straight edge may be placed across the face of the pulleys to check alignment. Tighten the belts only enough to take out slack and undue sag.

Warning: A disconnect switch must be installed on the saw. The electric supply lines from the disconnect switch may be connected using the diagram enclosed in the main control box. A copy is also furnished with these instructions. Most machines have a work light which must he connected to a separate 110 volt line. If the machine incorporates a transformer, this line will have already been connected. Machines that are equipped with electrically operated hydraulic brakes designated by the letter "E" in the model number have a hydraulic cylinder mounted near the top of the machine. This cylinder has a filler cap with a small vent hole. The vented cap has been attached to the cylinder assembly and a nonvented cap installed in its place. The non-vented cap should be removed and the vented cap installed in its place. The removable parts of the blade guard will be found in the tool box. These can be applied after the saw blade has been mounted. A pair of dust deflectors are furnished to slip into slotted holders where the saw blade enters and leaves the lower wheel chamber. These should be installed in the slots after the saw blade has been mounted. Do this while the blade is running and thus cut a saw slot in the defector while it is being inserted. Be sure that any other guards furnished are installed before operating the machine:

SAW BLADE CONTROL: The saw blade furnished with the machine usually is a standard blade for average work. The work for which this machine is intended may require some other type. Be sure that the proper blade is selected. A job is much easier and done in less time with a blade of proper width, tooth pattern, etc. It is also important that the saw blade be mounted and guided so as to be absolutely free running. The blade should not contact any part of the guards or guides when not actually cutting work. It must also be kept sharp.

After the machine has been in use for some time and the tires have become worn, a new blade when applied, may run in a different path on the tires. This will balance the wear on the tires. The position of the guides should always be checked however, to assure that the blade is properly supported in its new path. If your local saw supplier cannot advise you on the proper blades, contact us for recommendations. The length of the blade will be found marked inside the upper guard door. The hand wheel beneath the upper wheel is for raising and lowering the upper wheel. The proper tension on the saw blade is maintained by a spring device incorporating a scale and pointer to show the proper tension for various blade widths. These figures are average and the operator may find more or less tension desirable for a given job. No good is accomplished by applying excessive tension. It is good practive to release the higher tension settings at the end of a day's The tension spring should never be fully collapsed. The tracking of the blade, that is, the control of its path on the tires is accomplished by slightly tilting the upper wheel. This is done with an aluminum lever. This lever is packed in the tool box. The lever screws into a small disc behind the upper wheel guard just below its center.

GUIDES: All of the various types of guides are designed to keep the blade on a true path. The guides should always be set to give proper support without excess friction or strain on the blade. The guide is properly positioned fore and aft when the jaws cover the blade as close as possible to the bottom of the teeth. The back thrust wheel should be brought up close enough to the blade to hold it with the teeth fully out of the jaws. The wheel should have only sufficient clearance back of the blade to prevent turning when there is no pressure against it. The guide should be adjusted laterally so the saw blade will run very close, but not quite touching the jaws on the guide body. The slide member of the guide, with its jaws, can then be brought up equally close to the blade. Two set screws are mounted on the guide body to stop the movement of the side plate. These should be set after the desired jaw clearance has been obtained. At anytime thereafter, the guide is opened it will automatically close to the same pre-set clearance. Another use of the set screws is to cause a re-alignment of the jaws. The jaws are reversible on these guides to compensate for wear. By changing the upper jaws with the lower jaws on either guide, by setting the proper alignment, an equal clearance can again be obtained through the upper and lower jaws on the guide.

The upper guide is adjusted vertically by moving the main guide post up or down. On most machines this is accomplished with a hand wheel connected to a gear which drives the guide post. There is a stop pin placed in the upper wheel guard to prevent the blade guard from striking the wheel while the post is being elevated. The blade guard has removable sections which strike the stop. All the sections may have to be removed to obtain maximum heighth adjustment.

ELECTRICAL CONTROL: These machines are equipped with magnetic motor controls which usually have a separate push button station. Push buttons having jog buttons are installed on some models for the purpose of turning the wheels slightly for ease in shifting gears on transmission driven machines. All models with electrically operated hydraulic brakes have special magnetic controls which operate the brake system automatically either upon pushing the stop button or the loss of tension on the blade. The automatic brake controls are discussed further in the section on brakes. If it is found that the overload relays in the control are not holding the circuit closed during motor acceleration and work, heavier heater coils may be installed. The electrician should first be sure that the heavier coils can still afford ample protection for the motor. If, at any time, the machine is to operate on some voltage other than that for which it was originally wired, all of the electrical coils will have to be changed. This includes the coil on the brake operating mechanism on hydraulic brake machines.

MOTORS: The motors require very little attention. Any motors that are built into variable speed drive devices are usually described in the supplementary booklets furnished with variable speed machines. Some concern is caused by motor heating. There should be no cause for alarm unless the overload relays are releasing or there is smoke coming from the motor. Always allow the machine to get up speed before doing work on it. This will ease the load on the motor during acceleration. Frequent starts and stops cause excessive heat on the motor and controller. Allowing the machine to run will help to dissapate the heat.

WHEELS AND TIRES: The wheels furnished on TANNEWITZ saws are the truest running wheels. This is made possible by pressing the steel reinforced tires on to an accurately turned wheel face. The tires are precision ground after being applied to the wheels. When the tires have become worn to a point where the blade can no longer be smoothly carried, they should then be replaced. They are removable from the wheels by cutting through the tire with a hacksaw blade or a metal cutting keyhole type saw. Short strokes must be used and are best done at one of the

points where the blade enters or leaves the wheel guard. Some operators prefer to remove the wheel and make the tire change off the machine. A new tire can be applied most easily with a set of tire tools available at low cost. These should be ordered with your first order for a new tire. The tire can be pressed half way on to the wheel by hand. The screws of the tire tools are then placed into threaded holes found around the edge of the wheel. The clamp castings are placed on the screws and brought up against the outer rim of the tire. The nut is then placed on each screw and brought up against the clamp casting, the wrench is then applied to each nut alternately to drive the clamp against the tire, driving it fully onto the wheel. If the wheel has been removed from the machine for this operation, be sure to replace the key properly. It is wise to coat the shaft with grease before replacing a wheel.

GUARDS: For your protection guards have been installed to cover the blade except where the material is being sawed.

Warning: Keep all guards in place and properly adjusted when using the saw.

BRAKES: One type of brake is a double shoe internally expanding type. It is operated by cables connected to a foot pedal. These brakes, likewise do not require any adjustment other than taking up the slack in the cables. Turnbuckles are on the brake cables for this purpose. A part of the cable assembly may be connected to a trigger device which operates the stop button to shut off the machine. This cable, likewise, has a screw adjustment for take up. The trigger arrangement enables the operator to simultaneously apply the brakes and shut off the machine. Replacement lining is available for both types of brakes.

The other type of brake is a double shoe internally expanding hydraulic brake of the automotive type. Adjustment and servicing is covered in the section on hydraulic brake adjustment.

The table is mounted on a close fitting rocker assembly. It is tilted by means of a worm and gear device. A stop bracket is provided to stop the table at 0° when returned from any angle of tilt. This stop may be swung out of the way if it is desired to tilt the table back beyond the 0° While the worm and gear mechanism is a self-locking type, there is still a screw lock on the rocker assembly. Note that the table may strike parts of the dust chute or lower guide when tilting. The upper part of the dust chute is arranged so it can be moved out of the way. The lower guide, likewise, can be moved downward to provide clearance for the tilting table. An aluminum throat plate is provided for the table to protect the saw in case of excessive deflection. tapered plug is provided for insertion in the front edge of the table. This keeps the surface of the table in alignment. If the machine has been equipped with a power feeding table, supplementary instructions will be found on another page.

LUBRICATION: Cleanliness and proper lubrication will help assure trouble free service. A lubrication chart is found on page 8 to aid in properly caring for the machine. If the machine has special motor drive equipment and other accessories requiring lubrication or special service, literature covering it has been included with this book. Caution: Disconnect the power before doing any maintenance.

REPAIR PARTS: Complete diagrams of the machine are included for the purpose of ordering replacement parts when necessary. Always give the model number and serial number when ordering parts. The model number is stamped on the TANNEWITZ nameplate on the front of the machine. The serial number is stamped on the lower end of the upper wheel ways. It is desirable to have on hand certain parts which are susceptible to wear, we suggest that you order the following: tires, guide wheels, guide jaws, and throat plates. Consult the parts assembly sheets for the proper part numbers.

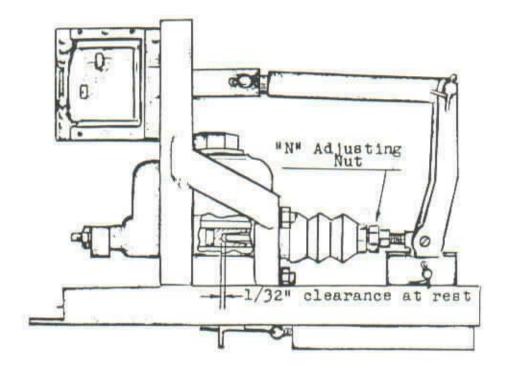
HYDRAULIC BRAKE ADJUSTMENT

The hydraulic brakes furnished on these machines are energized by a master cylinder. This cylinder is operated by an electric solenoid. A master cylinder assembly is found near the top of the machine. The electrically operated systems are set to stop the wheels in three to five seconds. This would be approximately three seconds from a 900 RPM speed and four seconds from a 1200 RPM speed. This is controlled automatically, energized by the pressing of the stop button or limit switch tripping on the blade tension arm, and releasing in 14 seconds. It is quite common for the wheels to require more than three to five seconds stopping time when first run after installation of the machine. They should, however, come to a stop within the preset time after three or four stops have been made. If the wheels are not stopping properly the following steps should be taken to correct the difficulties:

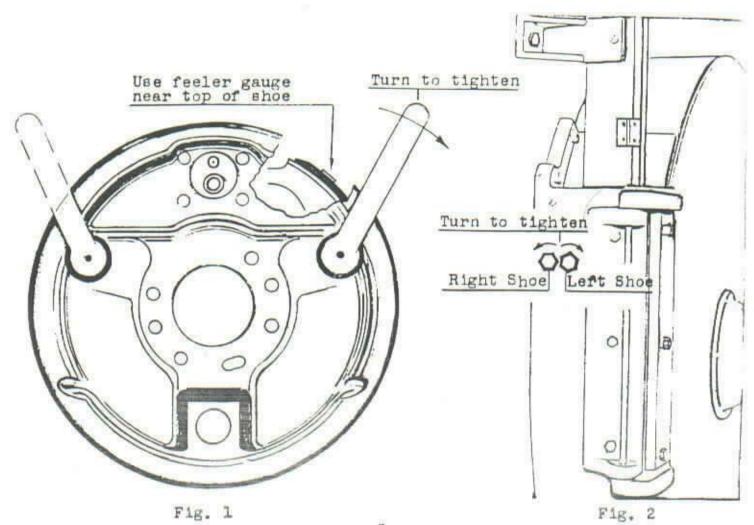
- Check the clearance between the brake shoe and the brake drum. This should be .005". A feeler gauge can be inserted through a hole in the front of the wheel hub. A wrench is furnished for direct application to the adjusting cams on the upper brake to tighten it. This is turned in the direction indicated on figure #1, page 7. The same application and direction of adjustment is made on the lower brake. On some models where the lower brake is not accessible, special adjusting rods have been connected to the brake so the adjustment can be made on the left wall of the machine. A very slight wrench movement is required on the upper brake, while a few full turns may be required on the lower adjustment, as shown in figure # 2, page 7.
- Check to see that no lubricating grease has worked into the brake drum. If grease is present, it may be well to remove the wheel and thoroughly clean the drum and brake assembly and areas that have become coated with grease.
- Remove filler cap from master cylinder to check for fluid level. The cylinder should be nearly full. If the fluid level is low it should be refilled with a standard automotive type hydraulic brake

fluid. The lines and fittings should be checked for possible leaks. After the machine has been in operation a long time, the seals in the cylinder may require replacement to prevent leakage. These may be ordered when necessary from the part number on the hydraulic brake diagrams. If the fluid level is very low because of leakage or a disconnection of the lines, the brakes may have to be bled to eliminate entrapped air. To bleed the brakes, a small rubber tube is attached to the drain fitting on the brake cylinder. On most models the tube is pressed onto the fitting. On others it is screwed into a hole normally plugged with a small screw. The fitting is a small needle valve and when turned allows the fluid to run out. The master cylinder must be pumped by hand to force the air laden fluid out of the lines. Keep the master cylinder at least half filled at all times to avoid getting more air in through the cylinder. Choose a clean container to catch the fluid. When the flow is free of bubbles, pinch the tube and tighten the fitting. Each brake should be bled. Always bleed the lower wheel cylinder first. Special care must be taken to avoid spilling any fluid on the brake lining. The bleeder tubes are available from us or any supplier of automotive brake equipment.

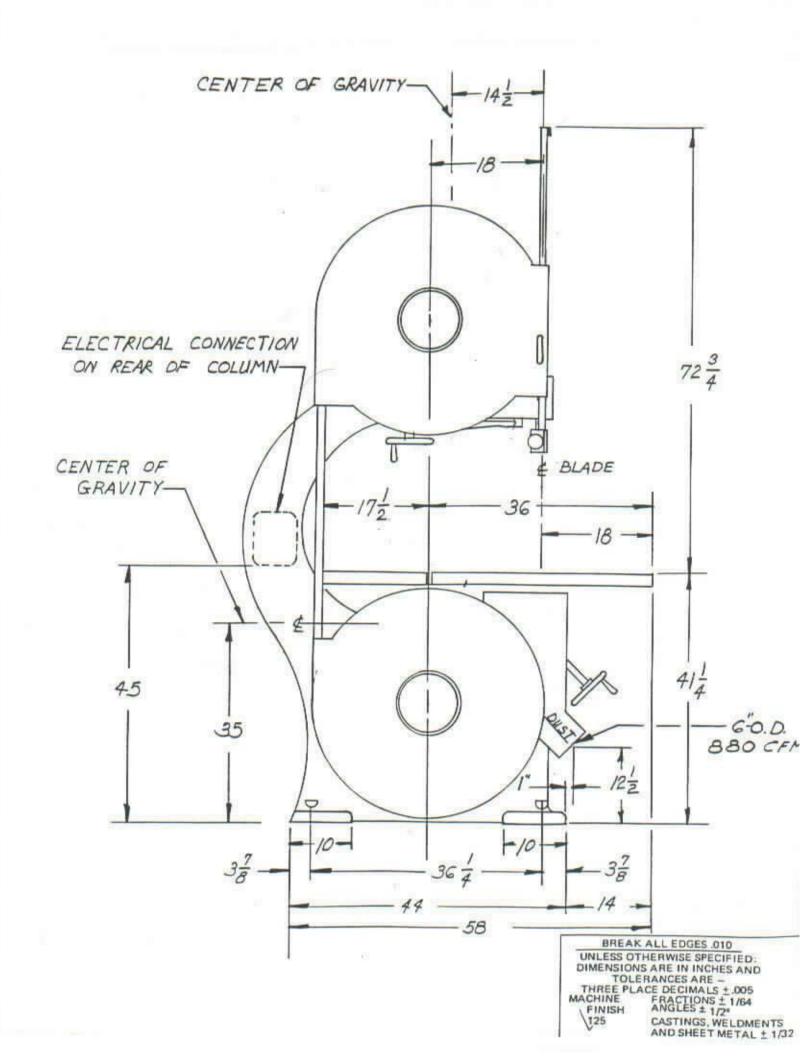
- 4. If the master cylinder is solenoid operated, check the movement of the solenoid plunger. It should move freely throughout its full stroke. It must complete a full stroke each time, pulling the connecting arm all the way till the plunger itself is stopped against the solenoid face. When the solenoid is released, there should be a little "play" in the linkage. This is caused by a required clearance of 1/32 to 1/16 in the master cylinder itself. See figure 3, page 7. If this does not exist readjust the clearance by turning nut N.
- 5. If it is necessary to change the holding time of the brakes on the solenoid operated systems, find the timer in the main control box. A small screw, indicated "increase" or "decrease," on the timer is turned as required. The brakes should normally release in about 14 seconds.

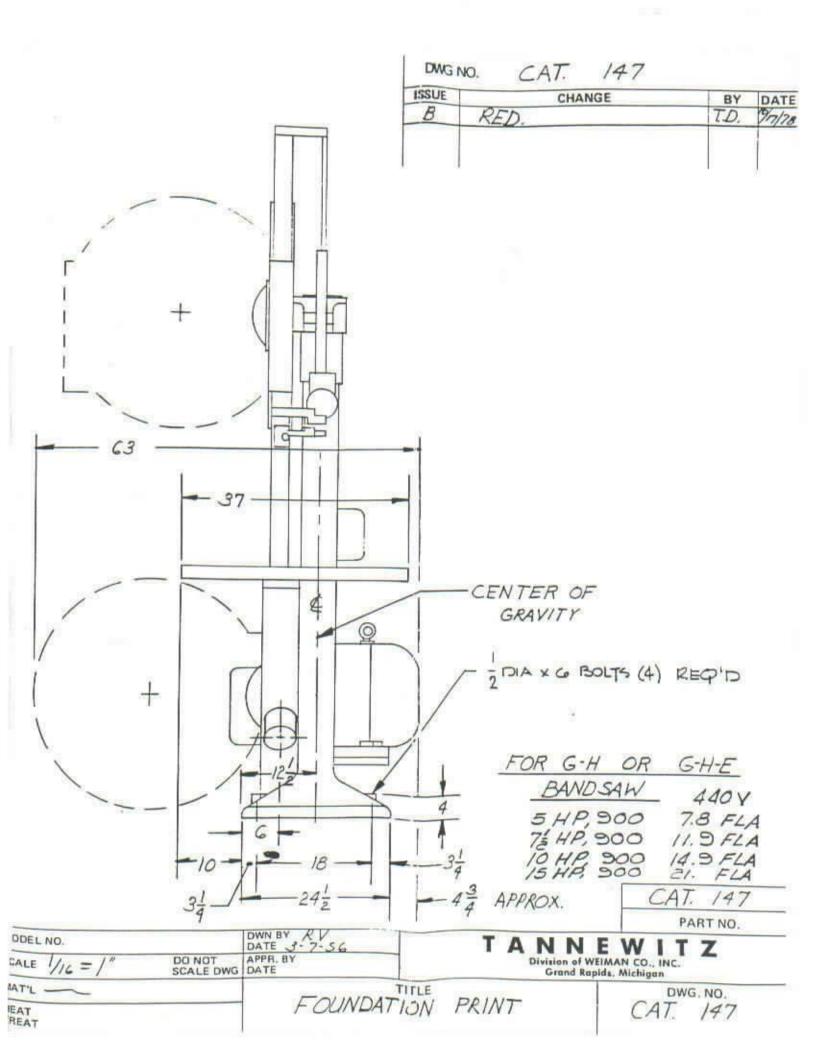


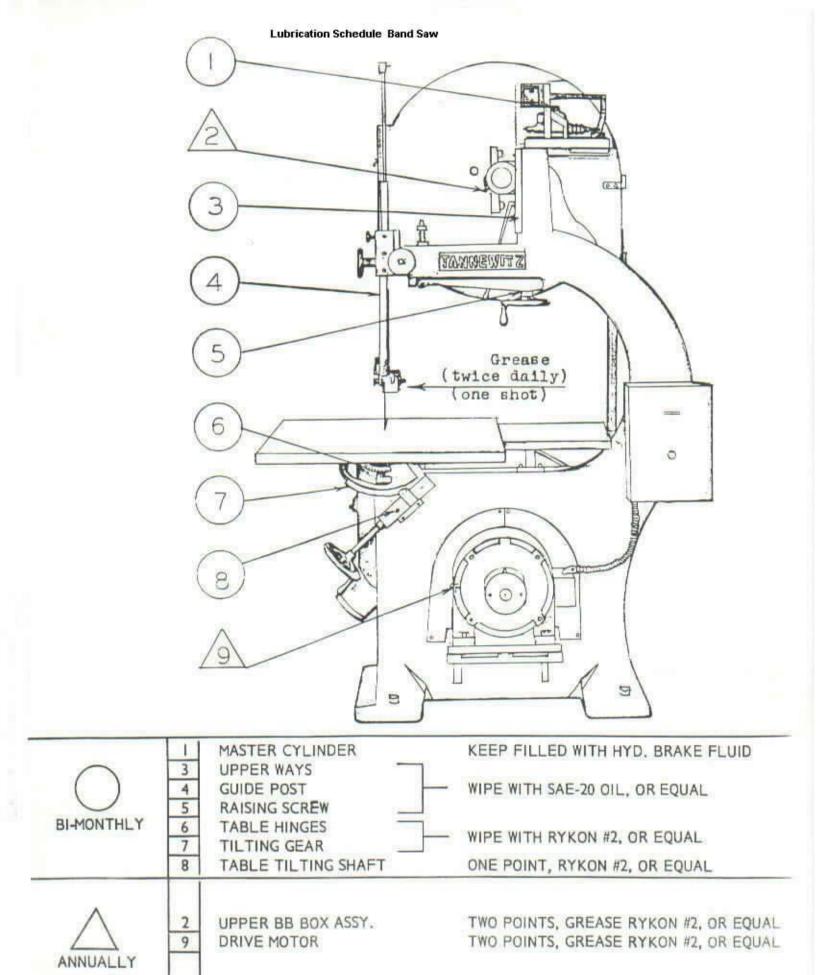
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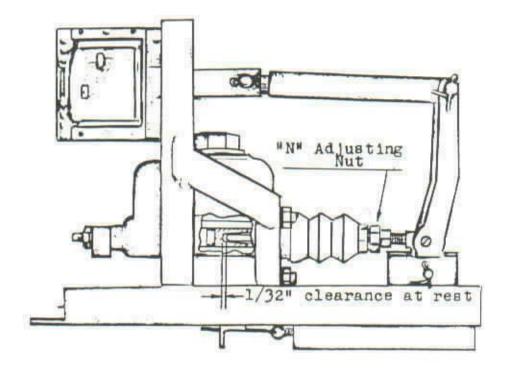


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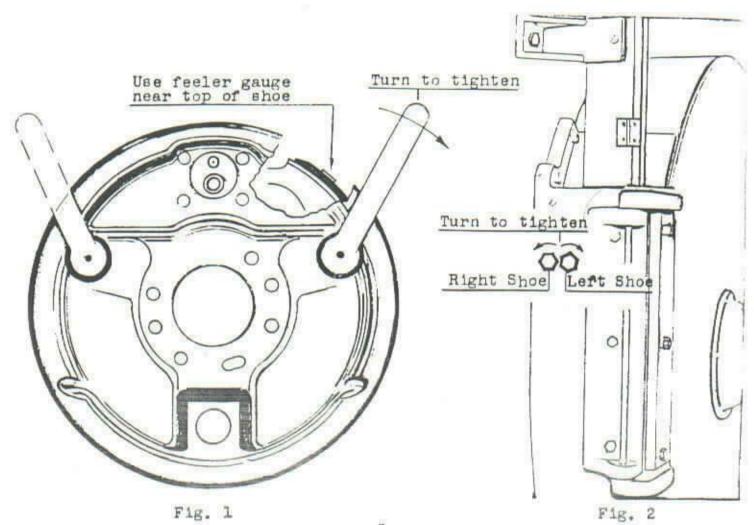






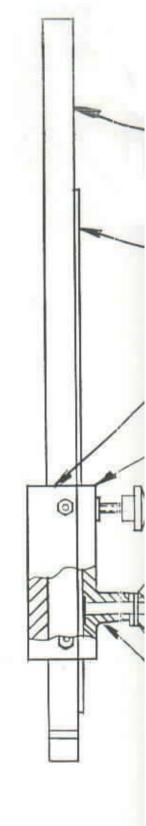


F1g. 3



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		2		
14	1 -	CLOCK SPRING ASS'T	G404	624
13	1	GUIDE POST STUD	12638	
12	8 10 100	SPRING PIN 3/10 ×3/4	691600194	66
11	3	LOCK HUT 1/4-20	621151000	
10	3	SET SCREW 14-20 X 1	641151032	
9	1	GIB .	Z4Me13D	
8	4	3/5-Kex3/4 SOC, ILD CAP SCIREIN	616359228	
7		PINION GEAR	B-243 B	
6.	1	LIAND INHEEL	K148 C	
5	1	KHOB	F413B	
4	i	GUIDE POST CAP	GUK	
3	1	GUIDE POST WAY	G846 E	-
2		RACK	G 358	
T	1	GUIDE POST	G 850-T	M
TEM	128010	DESCRIPTION	MAT'L	3

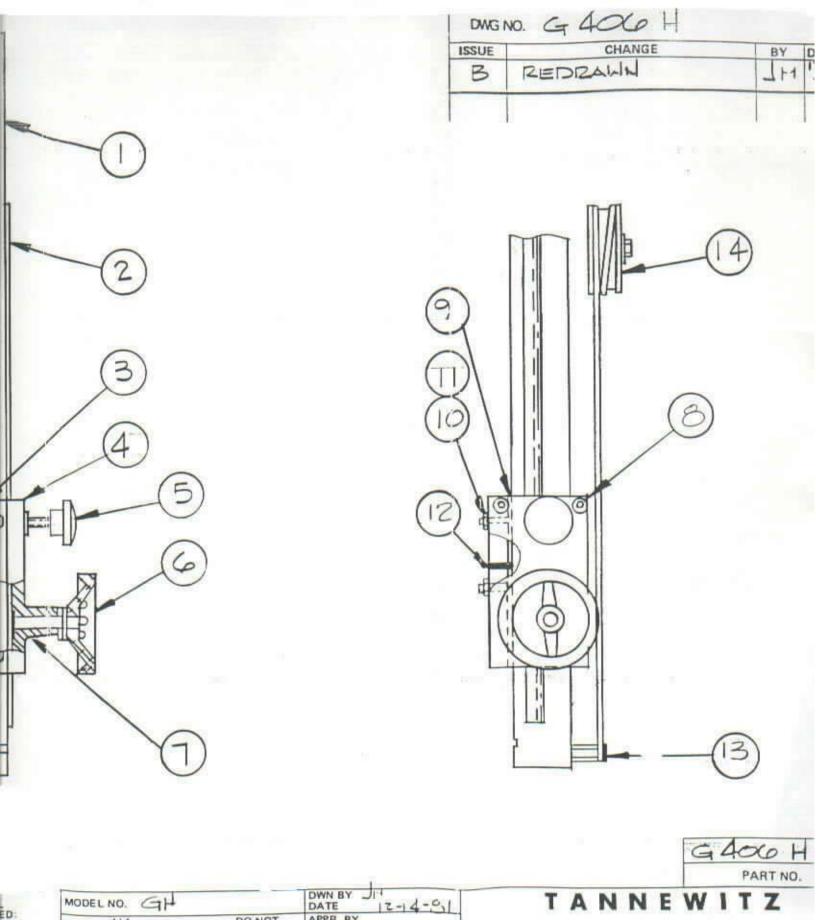


BREAK ALL EDGES .010 UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES AND
TOLERANCES ARE —
THREE PLACE DECIMALS ± .005
IACHINE FRACTIONS ± 1/64
FINISH ANGLES ± 1/2*

CASTINGS, WELDMENTS
AND SHEET METAL ± 1/32

St

M



DO NOT SCALE DWG DATE SCALE 1/4 Grand Rapids, Michigan GUIDE POST ASSI DWG. NO. MATIL SEE B/M HEAT TREAT DMENTS

AND

05 64

Tannewitz GUIDES PERFORM BETTER ...

last Several Times the Life of ordinary guides

When a saw blade breaks, it often hits the guide with sledge hammer force sufficient to fracture the ordinary cast from guide and make it useless.

TANNEWITZ GUIDE BODIES ARE UNBREAKABLE STEEL

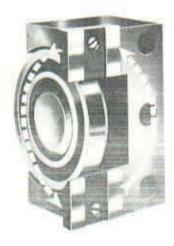




Guide wheels must take the continual thrust of the saw blade; an element which will quickly wear all but the hardest of steels.

TANNEWITZ GUIDE WHEELS ARE BALL BEARING STEEL

. . . and mounted on self-oiling ball bearings so constructed as to be free from clogging whether sawing wood or metal.



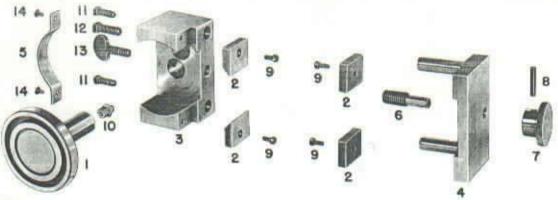


REVERSIBLE JAWS OF TEMPERED TOOL STEEL GIVE DOUBLE LIFE

Made of the toughest material available for parts of this sent, the ALINEWITZ STRIPE LAWS for this reason along, wound be extra long wearing in addition however there was have two intend at one wearing surface, in it of other quides. They are easily and partition of other parts of a doubling their length of service.

LET US SEND YOU ONE OF THESE GUILLE NO. YOUR INSTELL ON.

REPLACEMENT PARTS TANNEWITZ BAND SAW GUIDES



ITEM	PART NO.	NAME	QUAN
1	R-600	Wheel	1
2		Jaw (See figures 2 to 6 below)	1 1
3	R-82-A	flody	1
4	R-83	Plate	1
5	R-999	Guard	1
6	R-88	Stud	1
7	R-90	Knob	i i
8		Pin, 5/32 x 1/k spring lock	1
9		Screw_ # 10-32 x 4 Fillister head (included with jaws)	4
10		Fitting, Vs Alemite (included with wheel)	1
1.1		Screw, 5 16 x % sq. head	2
12		Screw, 1/4 x 1 sq. head	1
13		Screw, % a 1 thumb	1 1
0.6		Screw, # 10-32 x 1/4 Round head	9

Figures at right and below show the various types of jaws used on TANNEWITZ guides. Complete guides are equipped with set No. R-84-A for general purpose sawing.

Replacement jaws are furnished by the set. Each set as illustrated equips one guide. Mounting screws are included. If for some special application, four identical pieces from one set are desired the set number and the item number appearing in the set must be specified.

NOTE: Jaw set No. R-84 is replaced by jaw set No. R-84-A. No. R-84-A fits all existing Tannewitz guides.



Fig. 3 Jaw set No. R-84 A. These jaws are best for general all around work. These jaws are reversible and are used for blades from t_0^{**} thru 1 V_0^{**} wide.



Fig. 4 Jaw set No. R-84-8. These jaws are identical to the R-84-A type except that they are made longer to accommodate saw blades up to 1-3/4" width. They are not reversible.



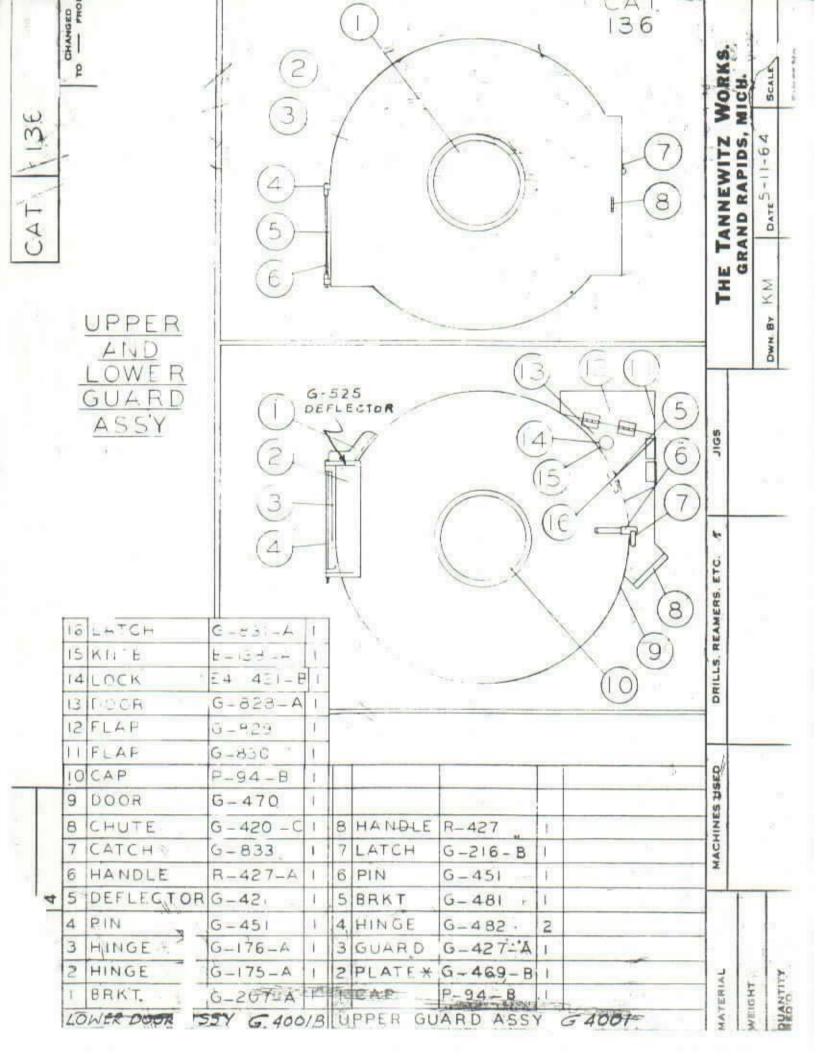
Fig. 5 Jaw set No. R-84-C. These jaws feature a carboloy wear surface. This provides the maximum in long maintenance free service. They are not reversible.

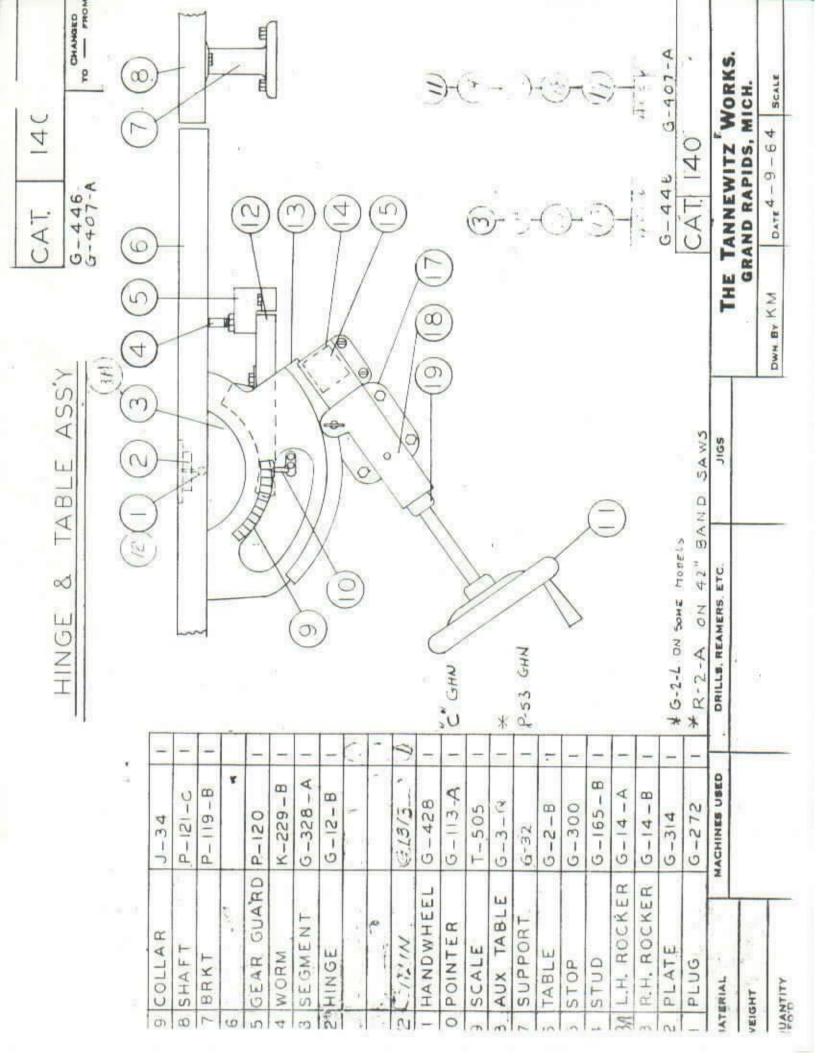


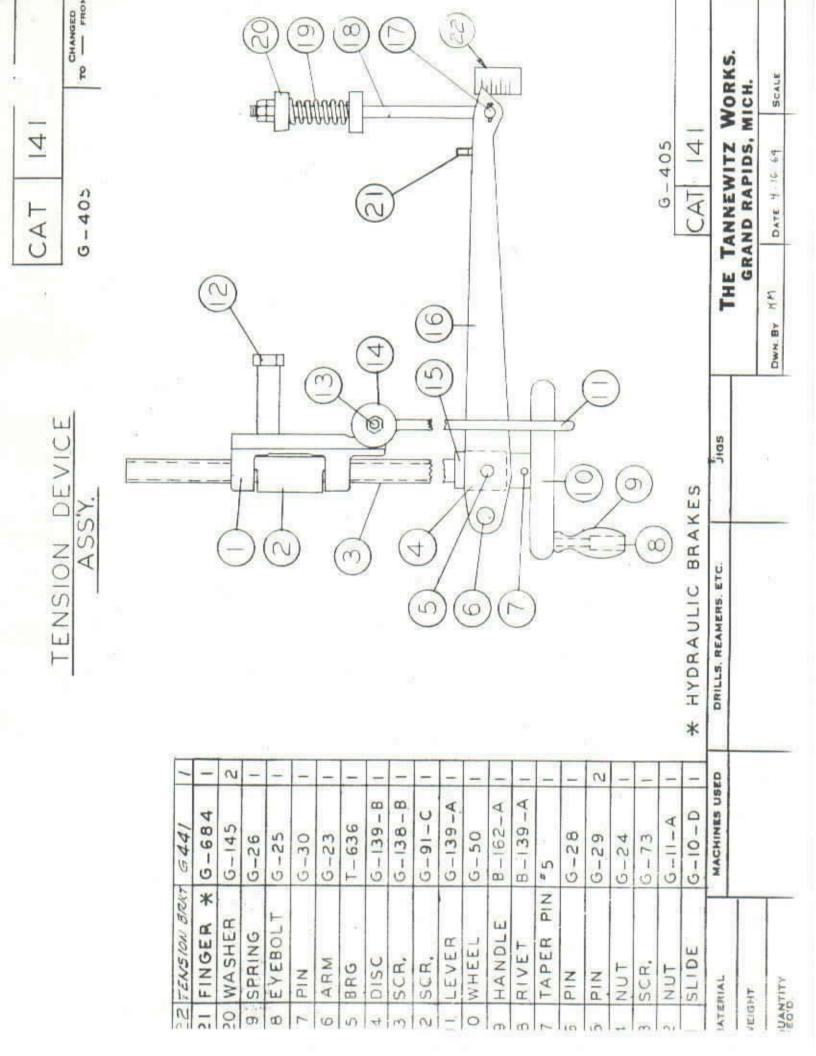
Fig. 6 Jaw set No. R-84-D. These jaws incorporate a pair of steel pins. The pins, inserted in the bottom of the lower jaws are used as guides for a template secured to the top of the work piece. These jaws are reversible. All four are drilled so the pins can be changed to the other pair when it is desired to reverse the jaws.

TANNEWITZ, INC. 0-794 CHICAGO DRIVE JENISON, MICHIGAN 49428

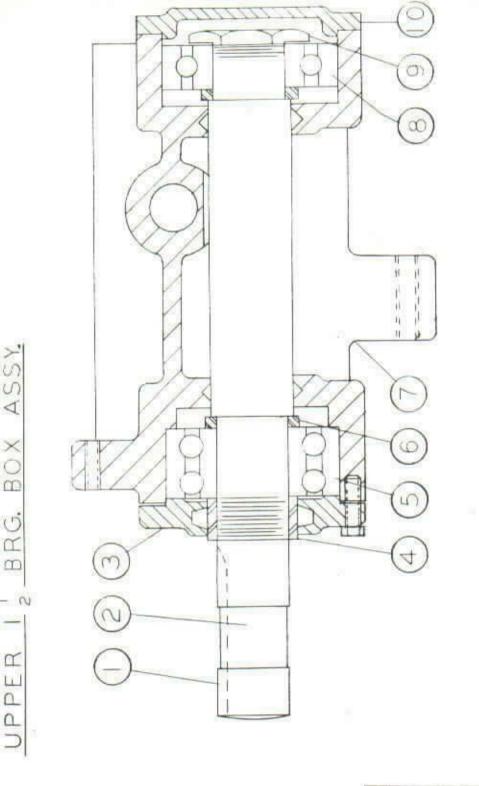
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SHAFT

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MATERIAL

WEIGHT

REG'D.

G-84

CAP

COLLAR G-106

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6 RING

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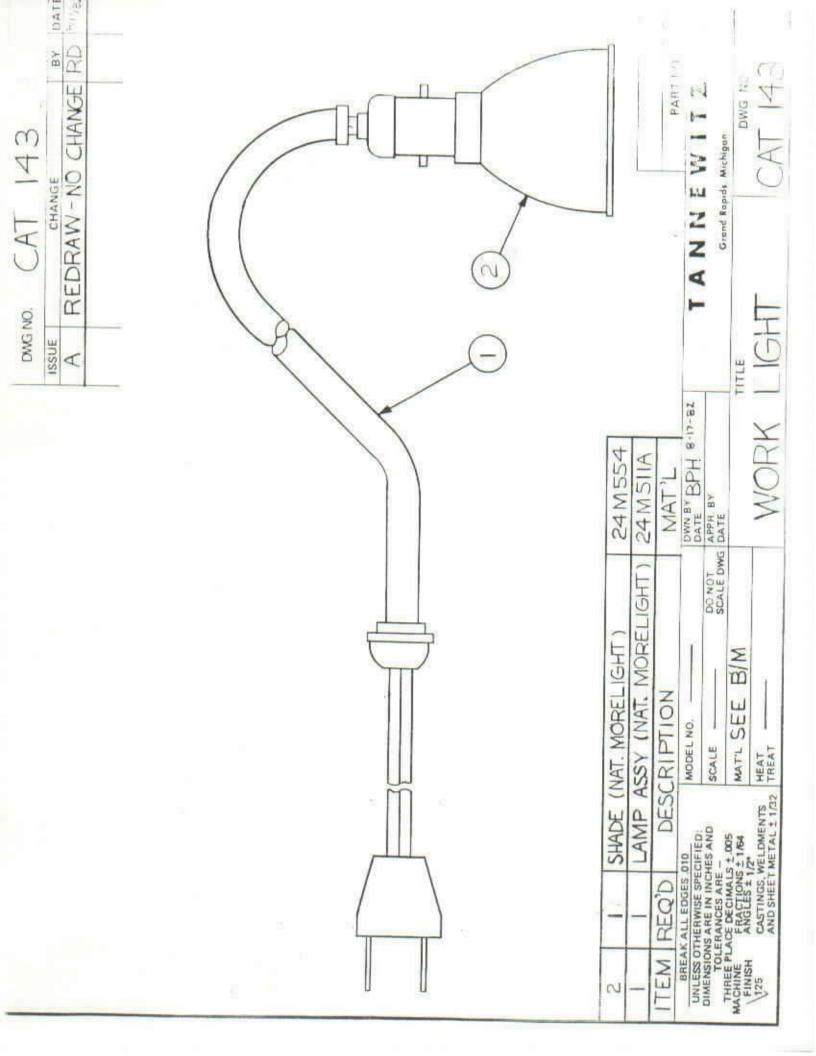
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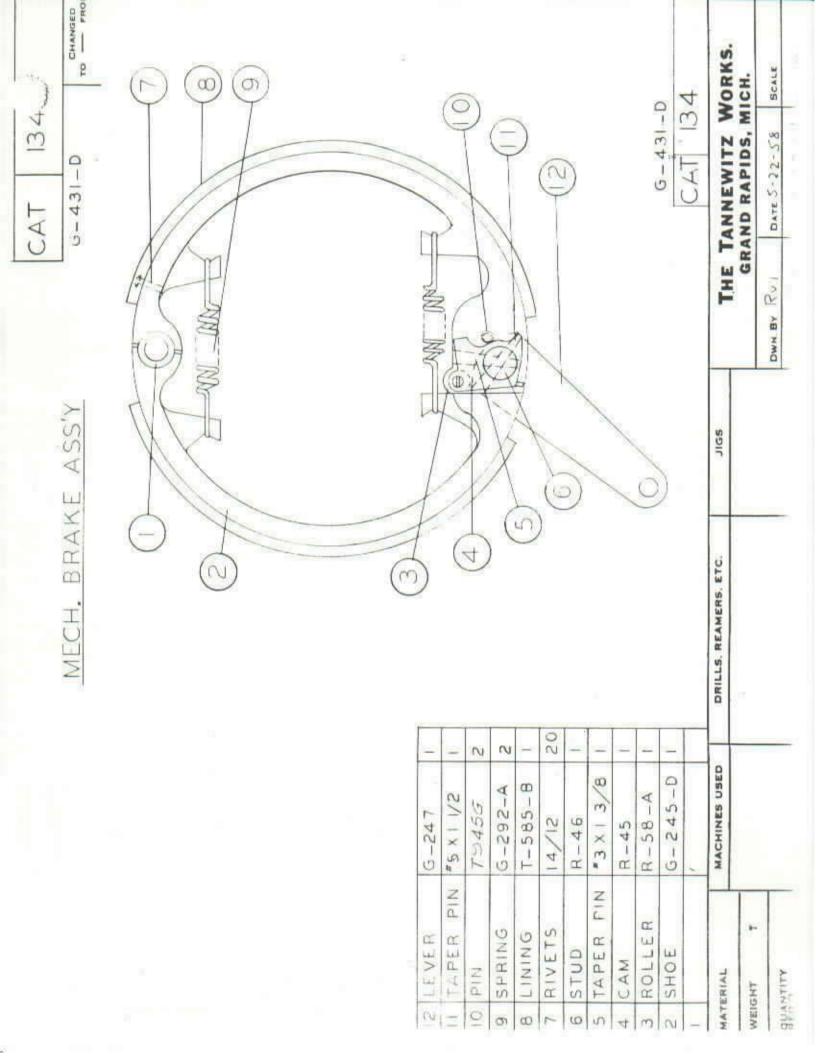
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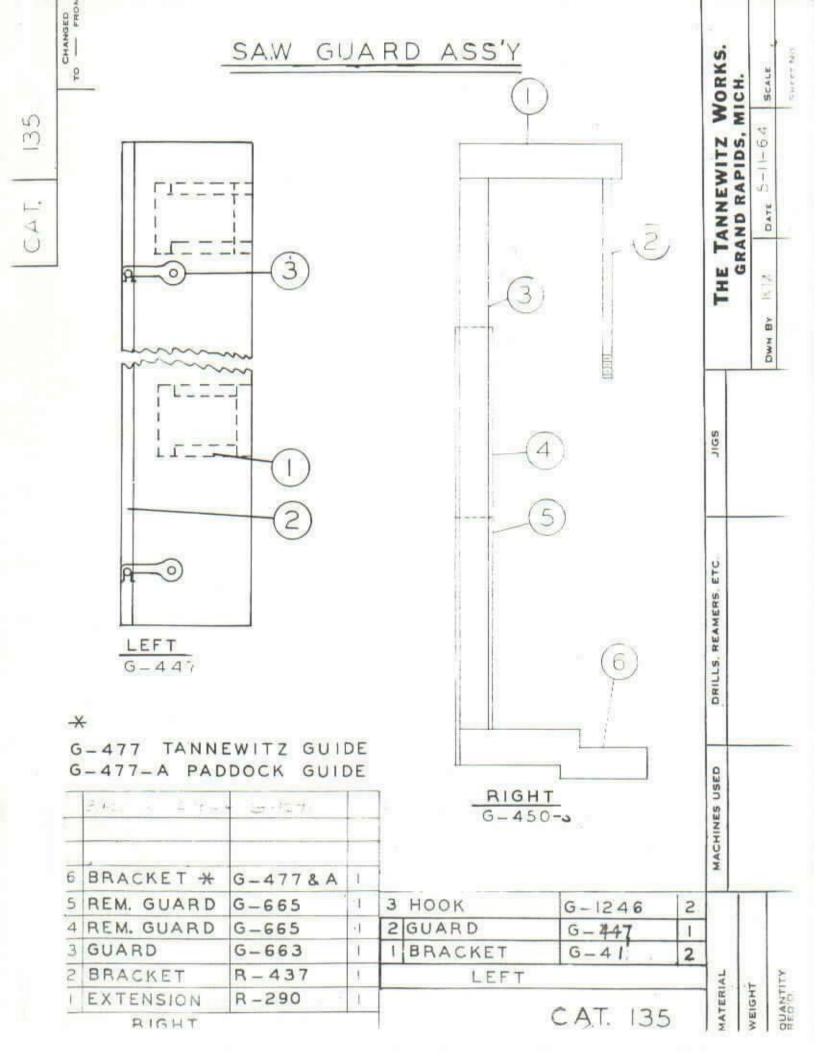
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ORDERING INSTRUCTIONS FOR WHEFLS & TIRES FOR YOUR TANNEWITZ SAW

Orders for wheels should specify size, bore and type of brakes on the machine. Machines have hydraulic brakes, mechanical brakes (pedal operated), or no brakes.

24" wheels
The diameter, including the tire, is 24". The bore may be 1",
1-1/8", or 1-1/4". When the brake operates the lower wheel
only, specify whether the wheel is for the upper or lower shaft.
The brake may be a mechanical type operating on a drum 5" dia.
or hydraulic type with an 11" diameter drum. 24" wheels are
either twin steel disc type or cast aluminum. Some hydraulic
contour saws have flanged wheels and must be specified on your
order.

30" Wheels
The diameter, including the tire is 30". The bore is usually 1-1/4". The brake may be mechanical type operating in a drum 8-9/16" diameter or a hydraulic type with an 11" dia. drum. Some hydraulic contour saws have flanged wheels and must be specified on your order.

36" and 42" Wheels
The diamter, including the tire, is 36" or 42". (42" wheels extend below the machine base). The bore is usually 1-1/2" but may be 1-3/4". The brake may be a mechanical type operating in a drum 8-9/16" diameter or a hydraulic type with an 11" diameter drum or hydraulic type with 10" dia.

Some machines are equipped with Super Rigid steel disc wheels identified by radial depressions in the discs. The bore in these wheels is musually 1-3/4" diameter. Specify "Super Rigid" if this type is desired.

Special Sizes
48" and 52" wheels can be properly identified by specifying the serial number of the machine.

Speedi Change Tires
All Tannewitz machines have the metal backed replaceable
Speedi-Change tire. Tires are specified by size, the same
as the wheels; that is , 24", 30", 36", etc. A set of special
tools is recommeded for moutning the tires. They are
reusable and should be ordered as "one set of tire tools."
When you receive your new tire, cut off the old one with a
hack saw and press on the new tire with the tire tools,
If neoprene, oil resistant rubber is required, it must
be specified.

ALWAYS GIVE SERIAL NUMBER OF MACHINE WHEN ORDERING REPAIR PARTS.
This number appears at the hottom of the upper wheel ways or on
the frame inside the upper door on contour saws.

