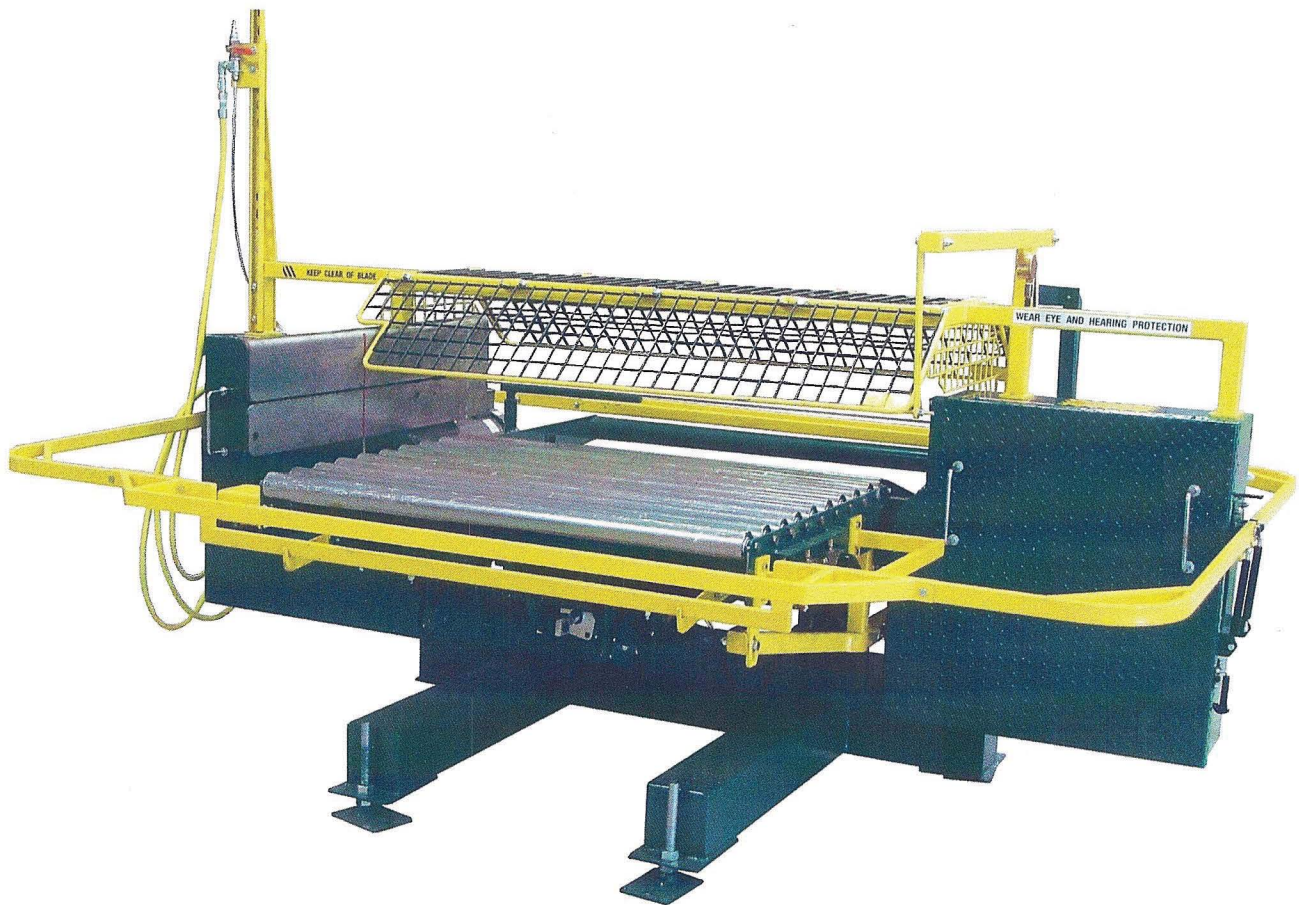


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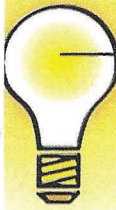
OPERATORS MANUAL

BLOCK PALLET PREP



3401 N. COMMERCE DRIVE
MUNCIE, INDIANA 47303

1-800-401-0099



SMARTPRODUCTS

3401 North Commerce Drive • Muncie, IN 47303
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To Our Valued Customers

Thank you and congratulations on choosing **Smart Products** as one of your key suppliers of high quality, pallet repair and recycling equipment for your business operations.

Since 1993, **Smart Products** has been the wood pallet industry's leader in the design and manufacture of pallet repair, recycling, and related equipment, including the "**Smart Saw**" described in this Operators Manual. Our expertly engineered products not only allow our customers to "get the job done", but to "get the job done right". We design and manufacture our equipment – products that offer "long-lasting" and "superior" value - with this in mind, in the simplest fashion possible, knowing and understanding the rigors and challenges you and we, as partners, always face in this fast paced, ever-changing, business and economic environment.

This Operators Manual, and the accompanying "Training DVD" (presented in English and Spanish), are designed to help you get the most out of your "**Smart Saw**". Please take the time to have your Supervisors, and Operators assigned to this equipment, read this Operators Manual and view the "Operation and Maintenance Training" DVD. Important "*safety features*", as well as "*required operating methods, practices, and processes*", are covered in detail so that operators are fully aware of how to "*safely and productively operate*" the "**Smart Saw**". We've made installation and operation quick and easy. With **Smart Products**, you can count on uninterrupted years of service with proper maintenance. Warranty information, recommended service intervals, as well as a "common spare parts" listing are presented to help address routine maintenance items. As always, we are only a phone call away at 1-800-401-0099 should you need further assistance with your "**Smart Saw**".

Thanks and continued success.

Kenneth R. Hess, President/Owner of Smart Products

SMART PRODUCTS

“BLOCK PALLET PREP” Machine

(Commonly Referred to as the “Smart Saw”)

Delivered Components, Installation Instructions, Electrical Safety Features, Canopy Guarding, and Starting the Machine

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DELIEVERED COMPONENTS

Your Smart Saw has been delivered to you “ready for installation” and includes the following items:

- Smart Saw machine
- Four (4) “jack screw attachments”, or adjustable feet, used to adjust the height of the machine that is desirable for the operator(s)
- Lumber recovery rack, used to collect the “discharge” on the back side of the Smart Saw
- “Connection Kit” (one per Smart Saw), which includes:
 - “mechanical strut” (with an air “shut-off” valve and air line that connects to the filter regulator already installed on the Smart Saw). This allows for easy routing to the Smart Saw of the electrical power and air supply from the ceiling of the facility
 - “tire gauge” to check the level of air pressure in the tires
 - “air chuck” to increase the level of air pressure in the tires
 - “blow gun” and “20’ of air hose”
 - “Block Recovery Tool”, or BRT
- “Tool Kit” (one per location), which includes:
 - “air impact” wrench
 - “socket” for air impact wrench
 - “grease gun” with a tube of grease
- “Common Spare Parts” (although strongly suggested, these items may or may not be purchased with your Smart Saw – subject to the direction of the purchaser of machine – normally purchased “one” for every 2 to 3 Smart Saws). The listing of items in the standard “common spare parts” is presented later in this Operators Manual.

SMART PRODUCTS

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INSTALLATION GUIDELINES

“Installation” of the Smart Saw requires a few simple procedures. These items are as follows:

1. Electrical power will need to be provided to the “electrical box/panel” on the Smart Saw, with the incoming power supply run through the pre-drilled hole with cord grip provided by the manufacturer at the bottom right corner of the electrical box. **A “LICENSED ELECTRICIAN” SHOULD INSTALL THE POWER TO THE MACHINE.** (NOTE: A picture of the electrical box/panel, including the inside components, is presented separately in the back of this Operators Manual). As is shown in this picture, the “LICENSED ELECTRICIAN” will wire the three “hot” legs of the three phase power into the bottom side of the disconnect switch provided in the panel/box. The “green ground wire” can be wired to the “ground terminal strip” provided inside the panel. Your LICENSED ELECTRICIAN should verify the voltage of your electrical power prior to installation. **CAUTION: IMPROPER VOLTAGE MAY RESULT IN DAMAGE TO MOTOR AND OR OTHER ELECTRICAL COMPONENTS.** Your electrician will determine the wire size necessary for the incoming power to the machine. Circuit breaker size for this machine is a 30 AMP breaker located in the main panel box at your facility.
2. Air supply will also need to be provided to this machine. The Smart Saw is built with a “filter/regulator” already installed on the machine. This filter/regulator is located behind the electrical panel/box of the machine. The filter/regulator has been pre-set at the factory at 100 PSI. The air supply at your facility will be connected to the “shut-off” provided as part of the “Connection Kit”. The outlet side of this “shut-off” valve has an air line attached to it that connects to the inlet side of the filter/regulator (the outlet side is already set-up for distribution to the various air valves installed on the machine). The air inlet supply location, provided with the “connection kit”, is assembled with “quick disconnect” fittings

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INSTALLATION GUIDELINES, continued

attached to the “shut-off” valve. This would allow the shut-off of air supply to the Smart Saw for required maintenance and inspection purposes.

ELECTRICAL SAFETY FEATURES

Your Smart Saw has been manufactured with “KEY ELECTRICAL SAFETY FEATURES”, which are required to be “activated” and functioning properly prior to the “start-up” of the machine. These key electrical features are as follows:

- Disconnect Switch with “lock-out” safety features
- Push/Pull stop button located on the top of the electrical box/panel
- Push/Pull stop button “remotely” located on the left front corner of the roller table side of the Smart Saw (commonly referred to as the “front” side of the Smart Saw).
- Two Perimeter Guards located on each side of the Smart Saw that must be placed in the “down position” before the safety circuits for these items are “closed” and power is provided to start the machine.
- Two Cabinet Door limit switches located on the inside of each of the cabinets on the Smart Saw. While facing the machine from the front side of the Smart Saw, the limit switch on the right side cabinet is located in the upper “right” corner of the cabinet. The limit switch on the left side cabinet is located in the upper “left” corner of the cabinet.
- Hydraulic Blade Tensioning “Pressure Switch”, which is located on the back side of the right hand cabinet. In order for the machine to start and continue running, this “pressure switch” must be “activated” by providing hydraulic pressure, via the hydraulic hand pump on the Smart Saw, to the recommended manufacturer specified pressure level of 2000 PSI. The hydraulic hand pump assembly is shown in a picture presented

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ELECTRICAL SAFETY FEATURES, continued

later is this Operators Manual. If the pressure drops below 1500 PSI (the pre-set level determined at the factory), the machine will not start nor will the machine continue to run if the pressure drops below this level during operation.

- “Green” start button located on top of the electrical box. This is used to start the Smart Saw and will only function if the safety mechanisms are properly “set”, as described above.
- “Red Indicator Pilot Light” located on top of the electrical box. This light will illuminate just prior to the saw being started and will turn off when the saw is started AND all safety functions are engaged and functioning properly. HOWEVER, your saw is built with a “Monitoring Safety Relay (MSR)” located inside of the electrical box which monitors the proper functioning of all of the safety features described above. In the event that an operator should “trip” one of the above safety features (such as lifting one of the perimeter guards of the Smart Saw) and the saw does not stop, the “RED INDICATOR PILOT LIGHT WILL ILLUMINATE”. When this occurs, the operator should IMMEDIATELY shut down the saw via the disconnect switch located on the outside of the electrical box. The operator should immediately contact his Supervisor for corrective action to be taken. **DO NOT OPERATE THIS MACHINE IF THE RED PILOT LIGHT IS ILLUMINATED WHILE THE SAW IS RUNNING. REQUIRED MAINTENANCE AND REPAIRS ARE NEEDED BEFORE THIS EQUIPMENT CAN BE PLACED BACK INTO SERVICE.**

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CANOPY GUARDING

The canopy guarding includes the main “top” center section as well as “front” and “rear” movable components that move up and down with the roller table. Each of the “movable” sections is attached to “slotted lift brackets” that allow these sections to move up and down freely for additional clearance, if needed, between the table and lowest edge of the “movable” section. This PRIMARILY OCCURS on the front side of the machine when the Operator needs to “tilt upward” the back side of the pallet while disengaging, or pulling, the pallet back out of the blade during the “one person” (or prepping) operation of a pallet. **NOTE: THESE “MOVABLE” SECTIONS HANG FREELY ON “SLOTTED LIFT BRACKETS” AND SHOULD NEVER BE “LOCKED” OR “BOLTED” IN PLACE OR IN THE HIGHEST POINT ON THE “SLOTTED LIFT BRACKETS”, nor SHOULD THEY BE TIED UP TO ALLOW FOR ADDITIONAL SPACE BETWEEN THE EDGE OF THE MOVABLE SECTION AND THE TABLE.** These movable portions are “KEY SAFETY FEATURES” installed to help protect the Operator(s) from the blade, while also providing the necessary flexibility for continued functionality of the Smart Saw.

STARTING YOUR MACHINE

With this understanding of the safety features, and with the Smart Saw properly installed, as described above, you are now ready to start the Smart Saw.

After your Smart Saw is wired and with the air supply provided to the machine, open the “shut-off” valve on the pump assembly and close the “ball valve” of the hydraulic hand pump. To close the ball valve, turn the “knob” to the right until it is tight – then it is closed. After closing the ball valve, proceed to provide pressure to the blade by “pumping” the handle until the level of the pressure, as shown on the pressure gauge, is about 2000 PSI. This is the optimal operating pressure for the hydraulic assembly and will provide longer blade life and easier operator

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STARTING YOUR MACHINE, continued

performance if this pressure level is maintained. As noted earlier, if the pressure drops below approximately 1500 PSI, the machine will stop. Or, when trying to start the machine, the pressure level must be greater than this level before the safety circuit for this switch is closed for the machine to be allowed to start.

Turn the “disconnect switch” on the Smart Saw to the “ON position”. “Pull out” both red buttons on the Push/Pull stop buttons. Make sure both cabinet doors are closed and the door straps (two of them on each cabinet) are properly secured. Make sure both perimeter guards are located in the “down” position. At this point, you are ready to start the saw.

Push the “Green Start Button” and your machine will start. **NOTE – CHECK BLADE ROTATION.** You now need to check the rotation of the blade. **THIS PROCESS SHOULD BE COMPLETED WHILE THE ELECTRICIAN IS PROVIDING POWER TO THE MACHINE.** Proper rotation of the blade will be toward the fence of the machine, which means the blade is moving toward the side of the machine where the motor/electrical panel is located. In addition, the “teeth” of the band saw blade should also be pointing this same direction – **TEETH POINTING TO THE FENCE.** If the blade is moving in the opposite direction (i.e., moving to the right), then have the electrician reverse/switch two of the three incoming lead or “hot” wires connected to the bottom side of the disconnect switch.

FINAL NOTE: Always remember, “SAFETY FIRST”

SMART PRODUCTS

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Additional Safety & Other Operating Instructions

Read and understand all safety stickers and warnings provided on the machine. Operator viewing of the accompanying “Training DVD” as well as reading and understanding the contents of this Operators Manual IS REQUIRED before any person operates this machinery. SEE YOUR SUPERVISOR for this information. **See also the attached – Operator “Pre-Inspection” Checklist – that lists daily items the Operator should check before operating this equipment.**

Eye and hearing protection are required before operating this equipment. As described in the accompanying “Training DVD”, face shields, gloves and, among others, a leather apron should be provided and worn during the operation of this equipment. See your Supervisor for your company’s required practices. Loose clothing should not be worn when operating this equipment.

KEEP AWAY FROM THE BLADE. Do not reach your hands closer than 12 inches from the blade on the machine, which is at the edge of the canopy guard above the table of the machine. Further, “Red Visual Markings” scored into the saw fence (on the front or roller side of the machine) and scored into the “discharge table” (on the back side of the machine) remind the operators “visually” not to place their hands beyond these guidelines.

Your Smart Saw is provided with a “Disconnect Switch” on the outside of the electrical box. This “Disconnect Switch” also has incorporated into it means for a “LOCK OUT” process. SEE YOUR SUPERVISOR FOR YOUR FACILITIES “LOCK OUT” PROCEDURES FOR THIS EQUIPMENT. Accordingly, when servicing the machine in any fashion, such as changing to a new blade, or when the blade comes off during operation, or to clean debris from the machine in any fashion, the operator must turn the disconnect switch to the off position and “lock out” the machine so it cannot be started while performing these or similar functions.

DO NOT MODIFY THE MACHINE IN ANY WAY. Modifications to the machine will VOID THE WARRANTY on the machine and may result in unsafe operations of the equipment by the operator.

Basic specifications and settings for your Smart Saw are:

Air pressure for tires	55 PSI
Hydraulic blade tension	2000 PSI – Optimal Setting
Air pressure on filter/regulator	100 PSI

SMART PRODUCTS
"BLOCK PALLET PREP" Machine
(Commonly Referred to as the "Smart Saw")
OPERATOR "PRE-INSPECTION" DAILY CHECKLIST

Notice to Operators Prior to Operating the Smart Saw:

Operate equipment in accordance with the procedures outlined in the Operators Manual for the Smart Saw.
See your Supervisor if you have not viewed the Training DVD or have seen the Operators Manual provided with this equipment.
Read and understand all safety stickers and warnings provided on the Smart Saw.
Complete the Operator's Checklist (below) prior to operating the Smart Saw.

Required "Personal Protective Equipment" (PPE) to operate the Smart Saw is as follows:

High impact rated eye protection (safety glasses)?
Hearing protection?
Safety toed work shoes with heavy soles?
Leather apron?
Long sleeve shirt - loose clothing should not be worn?
Leather gloves?
Full face shield/screen?

Yes	No

Required "tools" to operate the Smart Saw:

Claw hammer
21" mechanics pry or "wonder" bar (to help Operator on front (roller) side of table
create board separation for pallet insertion to blade - rarely needed, but helpful)
Push/pry stick and/or board. An old T3 board with a handle cut into one end works well.
Block Recovery Tool (BRT).

Yes	No

KEEP AWAY FROM THE BLADE. Do not reach hands closer than 12 inches from the blade (i.e., edge of the canopy guard painted yellow).

"RED VISUAL MARKINGS" scored into the saw fence and discharge table remind the operator also.

Work area around the saw is free and clear of debris/scrap.

With perimeter guards in the "up position", the operator can "walk completely around both sides of the Smart Saw".

Scrap dumpster is available and is located in the proper area.

Skid for disassembled, good deck & other boards is available and located in the proper area for lumber stacking/storage.

Discharge rollers for "pallets prepped" through the machine are functioning properly and are free and clear of debris/scrap.

"Tipper" and/or "Scissor Lift" for presentation of pallets to the Operator is functioning properly (if available to the Operator).

Yes	No

Inspect that the Smart Saw safety features are functioning:

Set blade pressure at 2000 PSI
"Pull Out" red button on both Stop buttons, located on top of the electrical box and "remotely" on the left front corner of the roller table.
Place perimeter guards in "down" position
Make sure both cabinet doors are in place with door straps/handles attached and in place.
Push "Green" start button. Machine should start.
Make sure blade is turning in the proper direction and teeth of the blade are pointing toward the fence.
With the machine running, check each "Red Stop Button" by pushing in. Machine will stop. (Push green start button to restart machine.)
Lift each "perimeter guard". Machine will stop. (Reset machine for starting by pushing in Red Stop button and pulling back out.
This resets the "Monitoring Safety Relay (MSR)" located inside the electrical box/panel of the Smart Saw.)
Unhook the door straps from each cabinet and slightly pull out on the bottom of the cabinet door. Machine will stop.
(Reset Red Stop Button. Perform this step for each cabinet door separately.)
Test the "Hydraulic Blade Tensioning - Pressure Switch". (Open the shut-off valve and "GENTLY" and "SLOWLY" open the ball valve of the hand pump. As the pressure "slowly" drops on the gauge, the machine will shut off when the pressure drops to about 1500 PSI. Reset Red Stop Button.)
Make sure air valves for table raise/lower are properly functioning.
Inspect air lines to ensure there are no leaks.

Yes	No

DO NOT OPERATE THIS MACHINE IF THE "RED PILOT LIGHT" (located on top of the electrical box/panel of the Smart Saw) IS ILLUMINATED WHILE THE SAW IS RUNNING!!!!!! Required maintenance and repairs are needed BEFORE this equipment can be placed back into service.

NOTE: In the event the operator "trips" one of the safety features AND the saw does not stop, this "RED PILOT LIGHT WILL ILLUMINATE". When this occurs, the operator should IMMEDIATELY SHUT DOWN the equipment via the "disconnect switch" located on the outside of the electrical box/panel.

NOTE: If any discrepancies are noted, see your Supervisor and SHUT DOWN Smart Saw by turning off disconnect switch.

NOTE: See your Supervisor to learn and understand your company's "LOCK OUT/TAG OUT" procedures applicable to This Smart Saw. (i.e., servicing machine, blade change, unjamming machine, cleanup, etc.).

Date of Inspection _____
Signature of Operator Conducting Inspection _____

List Corrective Actions Required to be Taken if Deficiencies are Observed During the Inspection.

Aviso para los operadores antes de operar la Sierra Inteligente (Smart Saw):

Operar el equipo de acuerdo con los procedimientos descritos en el Manual de operación de la Sierra Inteligente (Smart Saw).

Consulte con su supervisor si usted no ha visto el DVD de entrenamiento o el Manual de Operación de este equipo.

Lea y comprenda todas las etiquetas y las advertencias de seguridad parte de la Sierra Inteligente (Smart Saw).

Completar la Lista de Operación (que se encuentra siguiente en este documento) antes de operar la Sierra Inteligente (Smart Saw).

El Equipo de Protección Personal (EPP) "Personal Protective Equipment (PPE)" requerido para operar la Sierra Inteligente (Smart Saw) es el siguiente:

- Gafas de seguridad de alta protección ocular (gafas de seguridad)?
- Protección auditiva?
- Zapatos de trabajo de seguridad con suelas hierro?
- Delantal de cuero?
- Camisa de manga larga - ropa holgada no debe ser usada?
- Guantes de cuero?
- Máscara de Protección facial?

Yes	No

Herramientas necesarias para hacer funcionamiento de la Sierra Inteligente (Smart Saw):

- Martillo de garra
- Palanca mecánica de 18 pulgadas (para ayudar a el operador con los rodillos de el frente de la tabla
- Crear una separación en el bordo de los pallets para facilitar la inserción en la lámina cortadora - rara vez es necesario, pero útil)
- Un palo de empuje / un palo de movimiento forzado y / o un palo en general. Un palo viejo T3 con un mango cortado en un extremo sirve bien para ejecutar esta función.
- Una herramienta de recuperación de bloque "Block Recovery Tool" (BRT).

Yes	No

MANTÉNGASE LEJOS DE LA LÁMINA CORTADORA. No acerque las manos a menos de 12 pulgadas de la lámina cortadora (es decir, el borde de la cubierta de guardia pintada de color amarillo).

"MARCAS ROJAS VISUALES" engravadas en la barrera de la sierra y la tabla de despojo de material también recuerdan a el operador de esto.

Área de trabajo alrededor de la sierra esta libre de residuos / desechos.

Con baranda de perímetro "perimeter guard" subida, el operador puede caminar completamente en ambos lados de la Sierra Inteligente (Smart Saw):

Basurero de desechos está disponible y situado en el área adecuada.

Un pallet para el apilamiento y almacenamiento de los palos desmontados, los palos de buena cubierta y otros palos se encuentra disponible y ubicado en el área adecuada

Los rodillos de descarga de la máquina "pallets preparados" están funcionando correctamente y se encuentran libres de escombros y desechos.

El "Tipper" y/o el "Scissor Lift" para la presentación de los pallets hacia el operador está en funcionamiento (si este es disponible a el operador)

Yes	No

Inspeccione que las características de seguridad de la Sierra Inteligente (Smart Saw) estén en funcionamiento:

Programa la presión de la lámina a 2000 PSI.

Tire ("Pull Out") el botón rojo en ambos botones de parada, situado en la parte superior de la caja eléctrica y distanciada en la esquina frontal izquierda de la mesa de rodillos.

Coloque las barandas de perímetro hacia abajo "down".

Asegúrese de que ambas puertas de armario se encuentren en su lugar y que las correas de ajuste / agarraderos de puerta se encuentren en su lugar.

Empuje el botón "Green" de inicio. La máquina debe iniciar.

Asegúrese de que la cuchilla esté colocada en la posición correcta y que los dientes de la hoja apunten hacia la valla.

Con la máquina en marcha, hunda cada Botón de Pare Rojo "Red Stop Button" para asegurarse de que sirvan. La máquina debe parar (hunda el botón "green" de inicio para iniciar la máquina)

Suba cada baranda de perímetro "perimeter guard". La máquina parará. Reajuste la máquina para el arranque hundiendo el Botón de Pare Rojo "Red Stop Button" y luego tirándolo de nuevo.

Esto restablece el "Monitoring Safety Relay (MSR)", ubicado en la parte de adentro de la caja eléctrica/panel de la Sierra Inteligente "Sierra Smart."

Zafe las correas de puerta de cada gabinete y ligeramente hale el botón en la parte inferior de la puerta del gabinete. La máquina se detendrá.

Restablezca el Botón Rojo de STOP (performe este paso con cada puerta de gabinete separadamente)

Pruebe la Lámina de Tensión Hidráulica - el Interruptor de Presión "Hydraulic Blade Tensioning - Pressure Switch". (Abra la válvula de cierre "suavemente" y "lentamente" abra la bola de la válvula de la bomba de mano. Cuando la presión baja en el indicador "lentamente", la máquina se apagará, especialmente cuando la presión se baje al alrededor de 1500 PSI. En este momento restablezca el botón de pare rojo, también llamado Red Stop Button

Asegúrese de que las válvulas de aire para subir/ bajar la mesa esten en buen funcionamiento.

Inspeccione las líneas de aire para garantizar que no hayan fugas.

Yes	No

NO PONGA EN FUNCIONAMIENTO ESTA MÁQUINA SI LA LUZ DEL PILOTO ROJO O "RED PILOT LIGHT" (situada en la parte superior de la caja/panel eléctrico de la Sierra Inteligente o Smart Saw) ESTA ILUMINADA MIENTRAS QUE LA SIERRA ESTE EN FUNCIONAMIENTO !!!!!!! Esto significa que este equipo requiere de mantenimiento y reparaciones son necesarias antes de que este equipo puede ser colocado de nuevo en servicio.

NOTA: En el caso de que el operador "active" uno de los componentes de seguridad industrial y la sierra no se detenga, LA LUZ DE PILOTO ROJO "RED PILOT LIGHT" SE ILUMINARÁ. Cuando esto ocurre, el operador debe apagar el equipo inmediatamente a través de el interruptor de desconexión "disconnect switch" situado en la parte de fuera de la caja eléctrica / panel.

NOTA: Si encuentra alguna discrepancia en el equipo consulte con su supervisor y apague la Sierra Inteligente (Smart Saw) desconectando el interruptor.

NOTA: Consulte con su supervisor para aprender el proceso de LOCK OUT/TAG OUT de la Sierra Inteligente (Smart Saw) (es decir, el servicio de la máquina, cambiar la hoja, máquina unjamming, limpieza, etc.)

Fecha de Inspección:

Firma de la realización de la inspección del operador:

Lista de Acciones Correctivas que se deben adoptar en el caso de que alguna deficiencia sea observada durante la inspección:

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OPERATING INSTRUCTIONS

**“Removal of Damaged Outside Top Deck Boards, Outside & Inside Bottom Deck Boards, and Connector Boards (CB’s)” in a Block Pallet
(Performed as a “1-Person” Operation)
(Page 1 of 5)**

INTRODUCTION

Your Smart Saw was designed specifically to allow one (1) operator the ability to remove damaged outside top deck boards, and inside and outside bottom deck boards. The Smart Saw will also remove a damaged “outside” CB of a block pallet, a damaged “middle” CB of a block pallet, as well as a combination of a damaged “middle” and “outside” CB of a block pallet. A block pallet with three (3) damaged CB’s is classified as a “tear-down” block pallet. The written process and procedures for the “2-Person Operation” of a block pallet (classified as a “tear-down”) is presented later in this Operators Manual.

NOTE: These written operating instructions for the removal of damaged top and bottom deck boards and CB’s should be read in conjunction with the viewing of the companion “Training DVD” that presents and describes this process. To view the Training DVD, see your Supervisor. This Training DVD will help the operator understand and learn the proper and safe process, and required practices and procedures, to remove damaged top and bottom deck boards and CB’s in a block pallet.

As mentioned above, the machine was designed so that “1 Person” can perform the task of removing damaged top and bottom deck boards and CB’s from a block pallet. To operate the machine in this fashion, Operator #1 (referred to hereinafter as “O1”) stands on the “roller” side of the table (this side being commonly referred to as the “front side” of the Smart Saw) and places a block pallet upside down on the roller table (i.e., with the bottom boards facing up). O1 then uses the band saw to remove damaged top and bottom deck boards and CB’s from the pallet.

POSITIONING OF ROLLER TABLE FOR BLADE INSERTION

In order to start the blade into the pallet in the proper position, the level of the roller table must be positioned properly. The positioning of the roller table at the proper level for the blade to be inserted into a block pallet is accomplished by using one of, or a combination of, the three “air valves” provided on the machine and located on the right side of the roller table. When all three handles of the valves are

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POSITIONING OF ROLLER TABLE FOR BLADE INSERTION, **continued**

“pointed down”, the table is positioned at its lowest position. At this position, with the block pallet positioned on the roller table in the upside down position (i.e., with the bottom deck boards facing up), the blade will enter the pallet between the bottom deck boards and the block. With Valve #1 actuated (the air valve closest to the front of the roller table) (“actuated” meaning pulling the air valve lever up, with the lever pointing in the upward position), the blade will enter the pallet between the block and “damaged” CB. With Valve #2 (or the middle valve) actuated, the blade will enter the pallet between the CB and the top deck boards of the pallet. Valve #3, or the valve farthest from O1, actuates the lifting of the discharge table to its raised position of being level with the roller table. This Valve #3, in its actuated position, is used when removing a damaged “middle CB”. Its use will be described in further detail in the following section labeled “Removal of a Damaged Middle CB”.

REMOVAL of “DAMAGED OUTSIDE TOP and OUTSIDE & INSIDE BOTTOM DECK BOARDS ”

With the table in the lowest position (i.e., all air valves pointing down to the floor), Operator #1 (referred to hereinafter as “O1”), who is standing on the “roller” side of the table, places a block pallet upside down on the table (i.e., with the outside and inside bottom deck boards facing up). O1 then uses the band saw to remove any damaged outside bottom deck boards. To help start the blade into the pallet, the pallet should be started into the blade at a slight angle (see “Visual Marking” on saw fence for position of left corner of pallet when right corner of pallet is entering the blade). Additionally, O1 will slightly lift (about ¼”) the pallet to position the pallet for blade entry into the gap between the outside bottom deck board and the block. This “lifting” procedure was intentionally designed into the process to accommodate for varying thicknesses of pallet boards and to position the pallet to “ride” the blade through the pallet. This “riding” of the pallet on the blade helps guide the blade through the gap between the board and block with minimal effort or guidance from the operator. “Wiggling” the pallet from side to side, while continuing to keep the pallet at a slight angle, GREATLY enhances the nail cutting process and makes it SUBSTANTIALLY easier for O1 to dismantle the outside

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(Commonly Referred to as the “Smart Saw”)

OPERATING INSTRUCTIONS

**“Removal of Damaged Outside Top Deck Boards, Outside & Inside Bottom Deck Boards, and Connector Boards (CB’s)” in a Block Pallet
(Performed as a “1-Person” Operation)
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REMOVAL of “DAMAGED OUTSIDE TOP and OUTSIDE & INSIDE BOTTOM DECK BOARDS ”, continued

bottom deck board from the pallet. If necessary, O1 can then spin the pallet 180 degrees and clip the second outside bottom deck board, if it is damaged also. O1 can use a similar process on the inside bottom deck boards, if any of these boards are damaged.

To remove any damaged outside top deck board, O1 will raise the table to its “highest” position by actuating the first and second air valves. With air valves one and two activated, O1 will start the blade into the pallet by again placing the pallet at an angle to the blade (using “visual marks”) and slightly lifting the pallet so that the blade enters the pallet in the gap between the outside top deck board and the “connector” board, or CB. O1 will then push the pallet through the blade of the machine until the outside top deck board has been removed. If the other outside top deck board is damaged also, rotate the pallet 180 degrees and repeat the above steps.

REMOVAL of a “DAMAGED OUTSIDE CB”

With the table in the position with Valve #1 actuated (as described above), O1 places a block pallet upside down on the roller table of the Smart Saw. O1 will use the band saw to remove the damaged outside CB. To help start the blade into the pallet, the pallet should be started into the blade at a slight angle (see “Red Visual Marking” scored into the saw fence, located on the left side of the machine, for position of the left corner of the pallet when the right corner of pallet is entering the blade). Additionally, O1 will slightly lift (about ¼”) the pallet to position the pallet for blade entry into the gap between each of the three (3) blocks and the damaged CB. This “lifting” procedure was intentionally designed into this process to accommodate for varying thicknesses of pallet boards and to position the pallet to “ride” the blade through the pallet. This “riding” of the pallet on the blade helps guide the blade through the gap between the block and boards with minimal effort or guidance from the operator. Further, “WIGGLING” the pallet from side to side, while continuing to keep the pallet at a slight angle, GREATLY ENHANCES the

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REMOVAL of a “DAMAGED OUTSIDE CB”, continued

nail cutting process and makes it **SUBSTANTIALLY EASIER** for O1 to remove the damaged CB board from the pallet. After making the cut between the 3 blocks and the damaged CB, O1 will need to “back the pallet out of the blade”. To help with this process, O1 will use a “pry stick” (use of a T3 board is suggested) to open up the gap where O1 made the first cut so that the pallet can be “backed out of the blade”. Backing out of the blade at the same angle as the pallet was inserted into the blade will **MAKE THIS PROCESS MUCH EASIER and FASTER**.

O1 will then actuate Valve #2, which, as described above, will raise the table to the level that will allow for inserting the blade between the bottom side of the damaged CB and the top deck boards of the pallet. Again, with the pallet positioned at a slight angle (using the “Red Visual Marking” scored into the saw fence), slightly lift the right hand corner of the pallet so that the blade enters the pallet between the CB and the top deck boards. Once this process is properly started, “WIGGLING” the pallet from side to side while continuing to push the pallet into the blade, **GREATLY ENHANCES** the ease of the nail cutting process.

Upon completion of this cut, O1 will take the “pry stick” and push the damaged CB out the back of the Smart Saw and down the discharge table of the machine. O1 will then lower the table slightly by “deactivating” Valve #2 to its lowered position (i.e., pointing down). Using again the pry stick to open the gap cut by the blade, O1 will then “back the pallet out of the blade” at the same angle the pallet was inserted. The damaged outside CB has now been removed.

If the outside CB on the other side of the pallet is also damaged, turn the pallet 180 degrees and insert the pallet into the machine repeating the same steps as described above.

REMOVAL of a “DAMAGED MIDDLE CB”

As described earlier in this section, the Smart Saw was designed specifically for one operator to not only removed a damaged “outside” CB, but also a damaged “middle” CB. However, to remove a damaged “middle” CB, O1 will have to make

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REMOVAL of a “DAMAGED MIDDLE CB”, continued

an extra cut into one of the “outside” CB’s in order to enter the pallet and make the necessary “cuts” to remove the damaged “middle” CB. In many cases, if the “middle” CB is damaged, one of the “outside” CB’s is also damaged and will need to be removed. If this is the case, O1 will make the first cut on the damaged “outside” CB with the table at the level where the blade enters the pallet between the block and the damaged “outside” CB. Use the steps described in the above description to make this cut. Once this cut has been made, O1 is now ready to make the same cut on the damaged “middle” CB. However, O1 will need to actuate Valve #3 (the valve farthest from O1) by pulling up the valve handle. Doing this raises the discharge table of the Smart Saw to the level of the roller table. This allows O1 to use the “raised discharge table” to support the pallet when removing a damaged “middle” CB. After raising the discharge table with Valve #3, O1 can then insert the pallet into the blade between the middle blocks and the damaged “middle” CB of the pallet, repeating the same process as with a damaged “outside” CB. (NOTE: O1 needs to remember to “keep the pallet at a slight angle” and “wiggle the pallet from side to side” when making this cut also.) When this cut is completed, O1 will need to “back the blade out of the “middle” section of the block pallet” ONLY, using the “pry stick” again, so that the pallet can then be placed back into the blade for the second cut. Once O1 has backed out the blade from ONLY the “middle” section of the block pallet, O1 will then actuate Valve #2 to raise the level of the table where O1 can then insert the pallet back into the blade between the damaged “middle” CB and the top deck boards. At this point, O1 has made both cuts and can then take the “pry stick” and push out the damaged “middle” CB. O1 then lowers the table with Valve #2, uses the “pry stick” to open up the cut so that the “whole” pallet can then be “backed out of the blade”. At this point, O1 has completed removed the damaged “middle” CB. If the “outside” CB (where O1 made the first cut to enter the pallet) is also damaged, then O1 will lower Valve #3 to its down position (this lowers the discharge table to its original down position), and raise Valve #2 so that O1 can insert the pallet back into the machine with the table at the level where the blade enters the pallet between the damaged “outside” CB and the top deck boards (similar to the procedures described in the above section on “Removal of Damaged Outside CB’s).

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Operating Instructions for “Tear-Down” of Block Pallet “2 - Person Operation”

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For “tear down” operations, the BPP machine requires an additional operator standing on the back side (i.e., side opposite the roller table) of the machine.

With the table in the lowest position (i.e., all air valves pointing down to the floor), Operator #1 (referred to hereinafter as “O1”), who is standing on the “roller” side of the table, places a block pallet upside down on the table (i.e., with the outside and inside bottom deck boards facing up). O1 then uses the band saw to dismantle from the pallet each of the outside bottom deck boards. To help start the blade into the pallet, the pallet should be started into the blade at a slight angle (see “Visual Marking” on saw fence for position of left corner of pallet when right corner of pallet is entering the blade). Additionally, O1 will slightly lift (about $\frac{1}{4}$ ”) the pallet to position the pallet for blade entry into the gap between the outside bottom deck board and the block. This “lifting” procedure was intentionally designed into the process to accommodate for varying thicknesses of pallet boards and to position the pallet to “ride” the blade through the pallet. This “riding” of the pallet on the blade helps guide the blade through the gap between the board and block with minimal effort or guidance from the operator. “Wiggling” the pallet from side to side, while continuing to keep the pallet at a slight angle, GREATLY enhances the nail cutting process and makes it SUBSTANTIALLY easier for O1 to dismantle the outside bottom deck board from the pallet. After clipping the first outside bottom deck board, O1 spins the pallet 180 degrees and then clips the second outside bottom deck board.

O1 then raises the table to its “highest” position by actuating the first and second air valves. The “first” air valve is located closest to O1. The “third” air valve is farthest from O1, with the “second” air valve, accordingly, in between the first and third air valves. O1 also activates the third valve. Activating this third valve brings the discharge chute, which is attached to last roller on the roller table, to approximately the same level as that of the rollers. This allows the discharge chute to function as a table for Operator #2 (hereinafter referred to as “O2”) when tearing down block pallets.

With air valves one and two activated, O1 will start the blade into the pallet by again placing the pallet at an angle to the blade (using “visual marks”) and slightly lifting the pallet so that the blade enters the pallet in the gap between the “top deck”

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boards and the “connector” board, or CB. O1 will then push the pallet through the blade of the machine, “wiggling” the pallet from side to side, while keeping the pallet at a slight angle and not “straight into the blade”. O1 will “clip” the first ½ of the top deck boards of the pallet before releasing his hands from the pallet and allowing O2, who is positioned on the back side of the machine, to take over and “pull” the remaining half of the block pallet through the blade.

(NOTE: when O2 has completed the “top deck board” dismantling, what remains is “three” (3) sections of block subassembly (commonly referred to as a “crutch”). A “crutch” consists of a inside bottom deck board connected to three (3) blocks, which in turn are attached to a CB).

As O2 is pulling the pallet through the blade, O2 is also wiggling the pallet from side to side while also keeping a slight angle to the “pull” process for easier nail cutting/dismantling of the top deck boards from the pallet. As O2 cuts this crutch from the pallet, O2 places the crutch on top of the canopy guard for O1 to then take and begin a separate dismantling process on each of the three crutches. This will be discussed later. O2 will then place both hands on the middle crutch and cut the remaining top deck boards from this crutch. O2 will also place this dismantled crutch on top of the canopy guard for O1 to access and then dismantle. Lastly, O2 places both hands on the remaining crutch left on the block pallet and cuts any remaining top deck boards from the block pallet, also placing this last crutch on top of the canopy guard for O1 to access.

O1 then grabs a crutch, with the inside bottom deck board facing up. O1 inserts this crutch into the blade so that the blade enters the gap between the inside bottom deck board and the block. O1 then pushes the crutch through the blade until the 1st cut through the first block is made. O2 then takes over and “pulls” this crutch through the blade to cut the nails from the inside bottom deck board and the middle block and then proceeds to cut the nails from the last block and the inside bottom deck board. What “falls away” from the blade is a section of the crutch that includes the CB with three blocks attached. O2 will then take this CB/three block remaining subassembly and, with the blocks facing down, insert this remaining crutch back across the top of the blade, dropping the crutch down on the blade so

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Operating Instructions for “Tear-Down” of Block Pallet “2-Man Operation”

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that the CB is now “riding” on the blade. As O2 is inserting this crutch back across the blade, O1 activates table levers 1 and 2 so that the movable portions of the canopy guard are raised to allow O2 to pass the remaining crutch over top of the blade. Once O2 has done this, O1 then lowers the table. O2 then pulls back, guiding the blade between the CB and the block, with the “dismantled block” falling away from the blade and down the discharge chute. O2 will then turn the crutch 180 degrees, and, with the blocks facing down, insert the crutch back across the top of the blade (O1 raises and lowers the table, as described above), dropping the crutch on the CB so that the pallet will be positioned to “clip” the middle block by pulling back, and then concluding with “clipping” the large remaining outside block for dismantling. When the section is completed, the CB board will be clean of blocks with the middle block and large corner block remaining for reuse.

As can be expected, some of the remaining blocks may be attached to CB’s or inside bottom deck boards that are broken, leaving short sections with blocks attached, many of which are in very good shape and can be used again. In the past, these small remaining sections of the block pallet, including reusable blocks, have been discarded due to a lack of a “safe” method and/or process that would allow further recovery of reusable components. To help “safely” recover any additional reusable blocks, Smart Products has developed the “Block Recovery Tool” or BRT. The BRT grabs each side of the block that may have some damaged, short pieces of board attached to this “reusable” block. Placing these “salvageable” blocks between the “teeth” of the tool and clamping, these blocks can then be inserted into the machine for removal of these damaged pieces. After placing the block into the tool, O2 will clamp the handles to grip the block. O2 then, from the back side of the machine, inserts the block attached to the tool (tool is about 48” in length) into the machine and past the blade. Once the block, as well as any attached board, is past the cutting edge of the blade, O2 will slightly lift the tool (as it rests on the “fulcrum” provided with the machine) so that the damaged board attached to the block is “riding” on the blade. This will position the cutting edge of the band saw blade between the board and the salvageable block. O2 then pulls back on the tool with the blade cutting the nails between the board and the reusable block. O2 will also use the fence to the right of O2 as a means of leverage to allow for easier cutting actions of the nails. Additionally, some of the blocks salvaged may still have “nail stubble” protruding from the block. When this occurs, as it will in some cases, the BRT can be used to place the block into the machine so that the band saw blade can “clip” the “nail stubble” from these impacted blocks for reuse in repaired pallets.

SMART PRODUCTS

LIMITED WARRANTY

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DURATION OF LIMITED WARRANTY

The duration of the Smart Products limited warranty is for a period of one (1) year.

EXTENT OF LIMITED WARRANTY

Smart Products warrants to the end-user customer that Smart Products machinery and equipment purchased directly from Smart Products (or its authorized agents) will be free from defects in materials and workmanship. The warranty period begins on the date of purchase by the end-user customer and extends for the duration of the limited warranty.

Smart Products limited warranty covers only those defects in parts and workmanship that arise as a result of normal use of the product, and does not cover any other problems, including those that arise as a result of:

- Improper maintenance or modification;
- Parts or supplies not provided or supported by Smart Products;
- Operation outside the product's specifications;
- Unauthorized modification or misuse.

If Smart Products receives, during the applicable warranty period, notice of a defect in any parts or workmanship covered by Smart Products' warranty, Smart Products shall either repair or replace the parts and/or re-perform workmanship, at Smart Products option. Any replacement part must be provided by Smart Products and may be either new or like-new, provided that it has functionality at least equal to that of the part being replaced. Defective parts must be returned by the end-user customer to Smart Products. End-user customers will be billed at normal selling prices if the defective parts are not returned within 10 days. All parts and workmanship provided under this warranty will be considered as part of the original warranty and, accordingly, this warranty period will expire at the end of the duration of the initial limited warranty period.

SMART PRODUCTS LIMITED WARRANTY

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LIMITATIONS OF WARRANTY

TO THE EXTENT ALLOWED BY LOCAL LAW, SMART PRODUCTS MAKES NO OTHER WARRANTY OR CONDITION OF ANY KIND, WHETHER EXPRESS OF IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. The warranty provided for the Baldor motors that are standard on Smart Products equipment is direct from Baldor, with any warranty provided by authorized Baldor service centers.

LIMITATIONS OF LIABILITY

To the extent allowed by local law, the remedies provided in the Warranty Statement are the customer's sole and exclusive remedies.

TO THE EXTENT ALLOWED BY LOCAL LAW, EXCEPT FOR THE OBLIGATIONS SPECIFICALLY SET FORTH IN THE WARRANTY STATEMENT, IN NO EVENT SHALL SMART PRODUCTS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (including loss of time or use of any equipment), WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY AND WHETHER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

CONTACT INFORMATION

Should you have any questions regarding this warranty coverage, or other matters, or need any replacement parts or technical information, you may contact us at:

SMART PRODUCTS

3401 North Commerce Drive

Muncie, IN 47303

Toll Free: 800-401-0099

Office: 765-284-9545

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PROCEDURES for CHANGING the BAND SAW BLADE

The Smart Saw comes standard with a 20' Bi-Metal “M42” band saw blade. (See specifications included on a separate attachment in the back of this Operators Manual for recommended blade details).

To change the blade, the cabinet doors on the front of each of the cabinets will need to be removed in order to access the blade inside of the cabinets. **BUT FIRST**, before an operator enters the cabinet, **PLEASE “TURN OFF” THE DISCONNECT SWITCH** located on the side of the electrical box of the machine. (NOTE: Check with your Supervisor also for the “LOCK OUT/TAG OUT” procedures at your facility. The electrical panel comes standard with a disconnect switch that includes a “lock out” feature as part of the switch). After “locking out” the machine, via the disconnect switch, release the hydraulic pressure on the hand pump used for the blade tensioning (located on the back side of the right hand cabinet) by opening the “shut-off” valve and releasing the hand pump pressure via turning the “ball cock” valve on the hydraulic pump to the left. (Also, see the attached Figure A – “Installing a New Blade” in the Operators Manual for a “picture” description of this activity). Place your foot on the pivot arm assembly (which is the mechanism below the hand pump that houses the right side spindle assembly that holds the right tire in place) and push toward the center of the machine. This will release all of the pressure within the pump and cylinder and make it easier to pull the blade off of the machine.

After releasing the hydraulic blade tensioning pressure, you can now remove the cabinet doors on each side of the front of the machine (the front of the machine being the side that has the roller table) by unhooking the door straps (2 per cabinet) that hold the doors to the cabinets. You then lift the cabinet doors off of the locating pins on the top of each cabinet. You can then pull the “old” blade off of the machine so that a new blade can be inserted on the tires.

When installing the new blade, you will want to make sure that the “teeth” of the blade are to the front of the machine **AND** are pointing toward the fence of the machine, which is to the left or motor side of the machine. This is also the direction that the blade will need to be turning. **IMPORTANT POINT!!!** The blade moves toward the fence with the teeth of the blade facing the front of the machine **AND** also pointing toward the fence. When blades are received from your supplier, they will normally need to be “uncoiled”. When uncoiled, the teeth may not be pointing in the proper direction. “Rolling the blade inside out” and “turning the blade end

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PROCEDURES for CHANGING the BAND SAW BLADE, continued

to end” will make sure that you have the blade positioned properly for insertion into the machine.

Once the blade is in the proper position, place the new blade on the tires of the machine, in the center of the tires and between the upper and lower guide bearings located on the inside of each of the cabinets. Normally, the blade is in the proper position when the teeth of the blade are between the second and third grooves of the specified tire used on the Smart Saw. With the blade in place, tension the blade to the proper hydraulic pressure (optimally at 2,000 pounds as measured on the hydraulic gauge) by turning the “ball cock” valve all the way to the right and pumping the handle on the hydraulic hand pump until the proper level of pressure has been attained. Turn, by hand, the blade by rotating the tire on the idle side of the machine (which is the “right” side of the machine when standing on the side of the machine with the roller table). Place the doors back on each of the cabinets and latch the door straps. Place all perimeter guards in the proper position. Check the hydraulic pressure to make sure that it is set to a minimum of 1500 pounds or more (so that the saw will start). Turn the disconnect switch to the “ON” position, “pull out” on each of the Stop buttons, and press the Green Start button - the machine should start. Once started, verify that you have the blade going in the proper direction and the teeth of the blade are pointing to the fence of the Smart Saw. While the machine is running, adjust the hydraulic pressure to the optimal level of 2,000 pounds as measured on the gauge located on the hydraulic pump mechanism. You are now set to operate the Smart Saw again with a new blade installed.

NOTE: As with any new band saw blade, once the blade “heats up” after running several pallets through the machine, the blade will naturally “stretch”. Accordingly, the hydraulic pressure will need to be checked frequently (say after 5 to 10 block pallets), with pressure added, so that the proper pressure (2,000 pounds) is maintained for optimal performance of the Smart Saw.

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SUCCESSFUL BAND SAW BLADE LIFE

A couple of key points to help extend the blade life of a band saw blade:

Use the proper blade. We recommend the M42 Bi-Metal blade. Other blades may be cheaper with results dramatically reduced, particularly in this heavier and harder block pallet operating environment.

Maintain the tire pressure at 55 pounds, the recommended tire pressure.

When changing the blade, check for any “grooves” that may have developed in the tire from where the blade is running. This will normally occur when the tire pressure HAS NOT BEEN maintained at the proper level of 55 pounds. “Grooves” cut in the tire will not allow the blade to run properly in the tire and will impact the performance of the machine. Accordingly, the tire should be changed.

Always maintain hydraulic pressure at the optimal level of 2000 pounds. As mentioned earlier, the pressure will drop when the blade stretches after running the first several pallets. Additionally, when an operator “hangs up” the pallet on a nail while trying to back the pallet out of the blade, the blade will move to the front of the tires of the machine, which will cause the pressure to drop on the hydraulic gauge. Frequent (every 10 to 15 minutes) checking of the pressure level is vitally important to easier performance for the operator as well as better machine and blade life performance.

Make sure the blade is running in the center of the tire and is not running on the back bearing of the blade guide assembly located on the inside of each of the cabinets. See Figures A and B for further discussion of this blade tracking. The back side of the blade should be about 1/16” away from the back bearing. This back bearing will normally be the first bearing to wear out because of the repeated pressure placed on the bearing during normal operation. Check to see if there is a “groove” in this bearing. In most cases, this groove is caused by the blade constantly running on this bearing. However, normal operation over a period of time will also cause the bearing to eventually wear out. See Figures A and B in this Operators Manual for further detail and steps to set the back bearing in the proper position and for the steps to replace this bearing.

SMART PRODUCTS - SMART SAW

PREVENTATIVE MAINTENANCE AND PERFORMANCE LOG

(Photocopy this page and keep it in a log book to ensure a complete maintenance history.)

"LOCKOUT/TAGOUT" the SMART SAW before beginning any repair &/or maintenance work on the Smart Saw.

DAILY FIRST

Perform "Pre-Inspection Daily Checklist" for proper operation of electrical, safety & other features.

Check condition of band saw blade noting, if any, cracks, worn teeth, creases and/or difficulty getting a pallet through the teeth of the blade. Replace with Bi-Metal M42 band saw blade. Manufacturer recommends using Morse M42 Bi-Metal band saw blade. See your Supervisor for instructions in this area.

Check air in tires. Inflate to 50 - 55 PSI.

Check hydraulic blade tension. With the saw running, set at 2000 as measured on the hydraulic guage.

Make sure doors and guards are in place. Replace door straps if needed.

Check for air leaks in air cylinders and valves that control the roller table. Tighten valve handle if needed.

DAILY LAST (and PERIODICALLY THROUGHOUT THE DAY)

Use air hose and nozzle supplied to help clean and clear debris from the machine.

Clear out debris from between and under rollers of the table.

Clean area in and around Smart Saw.

WEEKLY

Check blade tracking, It should be in center of tires. If not, see your Supervisor for steps needed to adjust tracking of the blade (procedures are described and outlined in the Operators Manual).

Check for any grooves in tread of tires. Replace if necessary.

Inspect blade guide bearings. They should turn freely and be free of debris.

Inspect blade guide plates. Replace if grooves are cut in the plate.

Check under gear reducer for oil leaks.

Check hydraulic pump assembly (that tensions the blade) for leaks.

Check hydraulic pressure guage for proper operation (needle on guage should be at "-0-" with no pressure on blade).

Check for loose lug nuts on wheels. Tighten with impact wrench if necessary.

MONTHLY

LOCKOUT / TAGOUT electric panel. Open panel and do a visual inspection. If there is sawdust present, use the blow gun and blow the dust out. Close the panel and secure door tightly.

Walk around the machine and look at all the bolts and nuts to see if anything is coming loose. If so tighten it.

Put one small shot of grease to the grease fitting in the center of the idle spindle assembly (located inside the cabinet "opposite" the motor). To access the zerk fitting, remove "dust cap" from the center of the spindle/hub. Replace when completed.

SEMI-ANNUALLY

Check oil level of gear reducer by removing "level plug" on the side of the reducer. If needed, bring level of oil up to this point by filling at top of reducer (through "vent cap/fill plug") with Shell OMALA Oil 150.

ANNUALLY

Put one very small shot of grease in the two baldor motor bearings.

Visually inspect the entire machine for broken welds, parts, bolts, loose wires, etc.

SMART PRODUCTS - SMART SAW

REGISTRO DE MANTENIMIENTO PREVENTIVO Y RENDIMIENTO

(Fotocopie esta página y guárdela en el registro para tener un historial de mantenimiento completo)

Ejecute el proceso "LOCKOUT/TAGOUT" de la sierra inteligente (SMART SAW) antes de iniciar cualquier trabajo de reparación y/o mantenimiento de la sierra inteligente.

DIARIAMENTE (AL COMIENZO DEL DÍA)

Repase el "Listado de revisión diario de pre-inspección" para la correcta operación de las partes eléctricas, de seguridad y otras características. Revise la condición de la cuchilla flexible de la sierra y tome nota si encuentra hendiduras, dientes desgastados, desniveles y/o dificultad para insertar un pallet a través de los dientes de la cuchilla. Reemplace la cuchilla con el modelo Morse M42. Contacte a su supervisor para obtener instrucciones específicas.

Revise el aire de las llantas. Inflélas a 50-55 PSI

Revise la tensión de la cuchilla hidráulica. Con la sierra prendida, ajuste a 2000, tal y como lo muestra el manómetro hidráulico.

Asegúrese de que las puertas y seguros estén en sus lugares correspondientes. Reemplace las correas de las puertas si es necesario.

Revise si hay escapes de aire en los cilindros de aire y en las válvulas que controlan la mesa de rodillos. Apriete la manilla de la válvula si es necesario.

AL FINAL DEL DÍA (Y PERIÓDICAMENTE A LO LARGO DEL DÍA)

Utilice la manguera de aire y boquilla que está disponible para ayudar a limpiar y clarear residuos de la máquina.

Limpie los residuos que se encuentren entre y bajo los rodillos de la mesa.

Limpie el área interna y que rodea a la sierra inteligente (Smart Saw).

SEMANALMENTE

Revise la posición de la cuchilla. Debe estar en el centro de las llantas. En caso contrario, contacte a su supervisor para determinar los pasos a seguir para ajustar la posición de la cuchilla (se detalla y describe en el Manual del Operador).

Revise si hay ranuras en la superficie de las llantas. Reemplace si es necesario.

Inspeccione los límites de las guías de la cuchilla. Deben rotar libremente y estar libres de residuos.

Inspeccione los platos de la guía de la cuchilla. Reemplace si hay ranuras en los platos.

Revise si hay botes de aceite debajo de la caja de reducción.

Revise si hay escapes o goteos en el montaje de la bomba hidráulica (que le provee tensión la cuchilla)

Revise el manómetro hidráulico para asegurar su correcto funcionamiento (la aguja del manómetro debe estar en "0", sin presión sobre la cuchilla).

Revise si hay tuercas sueltas en las llantas. Apriete con la llave de impacto si es necesario.

MENSUALMENTE

Realice la operación "LOCKOUT / TAGOUT" del panel eléctrico. Abra el panel y realice una inspección visual. Si encuentra aserrín, utilice la pistola de aire para eliminar el polvo. Cierre el panel y asegure bien la puerta.

Camine en los alrededores de la máquina y revise todas las tuercas y tornillos para determinar si alguno se está soltando. De ser éste el caso, apriételes.

Aplique una pequeña cantidad de grasa en el receptáculo que se encuentra en el centro del montaje del eje que no está en uso (que se encuentra adentro del gabinete opuesto al motor). Para tener acceso al receptáculo remueva el guardapolvo del centro del eje. Reemplace el guardapolvo cuando termine el procedimiento.

SEMI-ANUAL

Revise el nivel de aceite de la caja de reducción removiendo el tapón del nivel que se encuentra a un costado del reductor.

Si es necesario, lleve el nivel de aceite a este nivel llenándolo por la parte superior del reductor (a través del tapón de llenado) con aceite Shell OMALA Oil 150.

ANUAL

Vierta una cantidad muy pequeña de grasa en los dos límites del motor Baldor.

Inspeccione visualmente la totalidad de la máquina para detectar si hay soldaduras rotas, partes, tornillos, cables sueltos, etc.

Installing a new blade

Unfold the new blade. Make sure the teeth are pointing in the right direction. (toward the fence)

Fig. A



- To remove the blade open the ball valve
- Open the hydraulic pump valve
- Remove the old blade
- Install the new blade and center it on the tires making sure it is in the blade guides
- Close the hydraulic pump valve
- Pump the jack to 1800 PSI
- Start the machine and run for a few seconds
- Check to see if blade is centered on the tires
- If not go to Fig. B (Next Page)
- If yes check to see if the blade is 1/16 in. from rear blade guide bearing
- To adjust, loosen the blade guide adjusting knob and push the blade guide back
- Run the machine for a few seconds
- Check again to see if the blade is centered on the tires
- Adjust the blade guide till the rear bearing is 1/16 in. from back of blade
- Do this on both wheels
- Pump the pressure to 2000 psi
- Close the ball valve

TRACKING THE BLADE

Fig. B

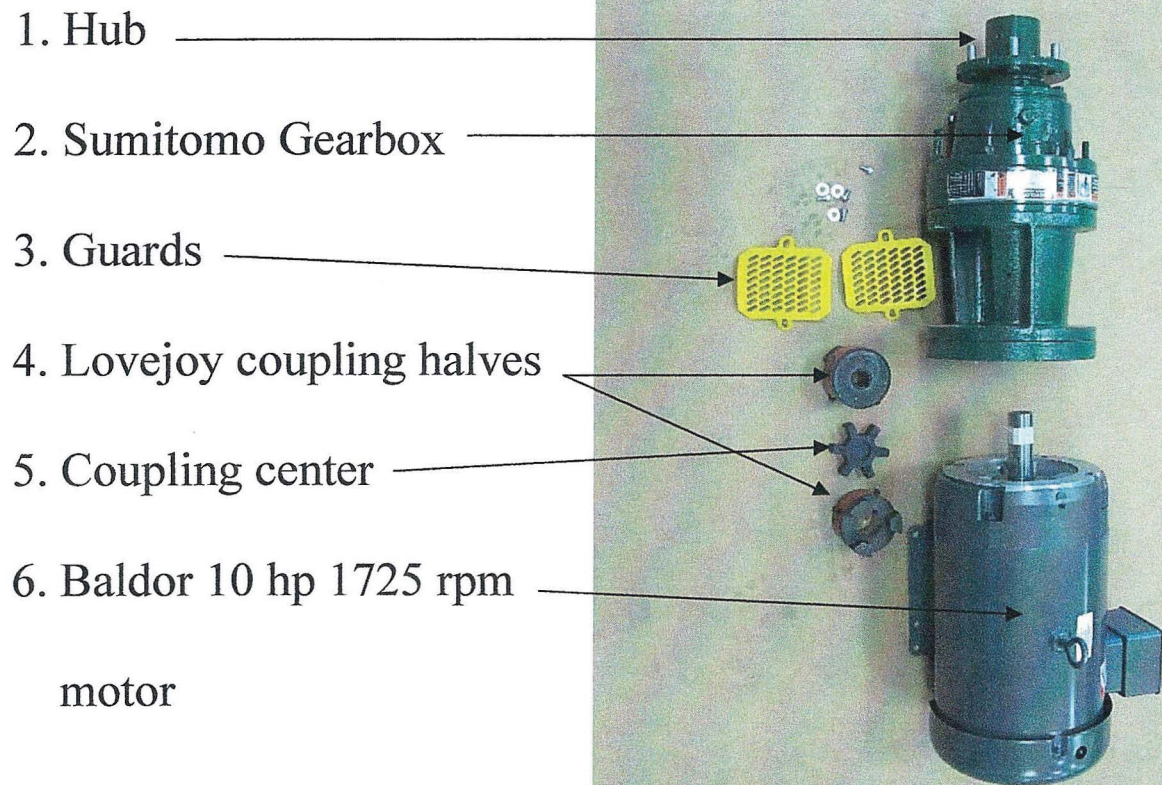


- To track the blade you will use these four bolts at 12, 3, 6, and 9 o'clock
- If the blade is running forward of center on the tire, loosen the blade guide adjusting handle and push the blade guides back. Do this on both wheels
- With at least 1800 psi on the hydraulic pump run the machine for a few seconds, check the blade
- Loosen the lock nuts on all four bolts
- Hold a straight edge vertically on the face of the wheel and measure the distance at the top and bottom from the straight edge to the back of the cabinet. It should be the same
- If not use the bolts at 12:00 and 6:00 to correct it
- Loosen one and tighten the other until the measurement is the same
- To get the blade to run in the center of the tire use the bolts at 3:00 and 9:00
- Loosen one and tighten the other 1/4 turn at a time.
- Run the machine for a few seconds and check
- Repeat until blade is centered on tire
- Tighten all four locknuts
- Adjust blade guides until the blade is 1/16 in. from back bearing

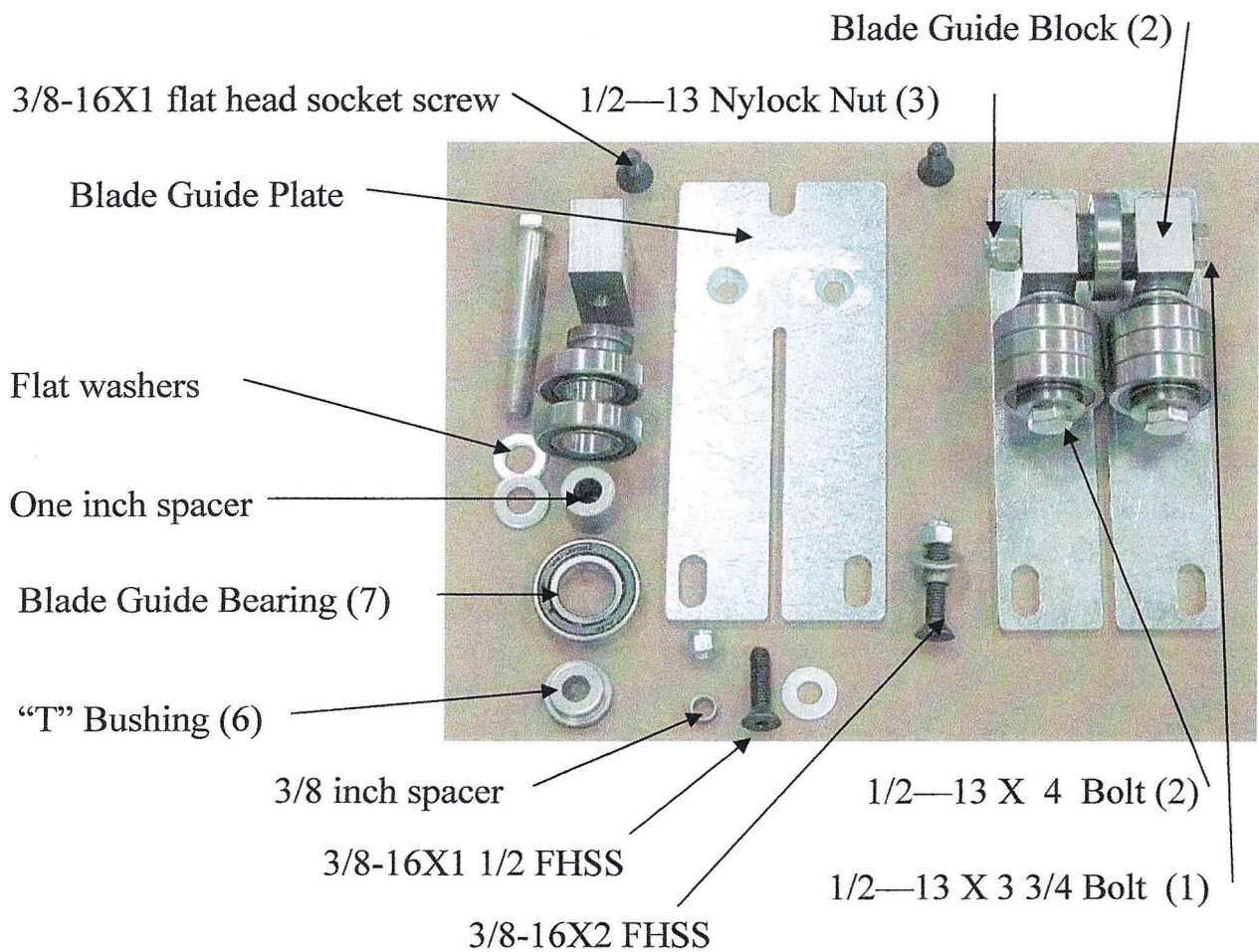
Smart Products

Block Pallet Prep Machine

Motor / Gearbox



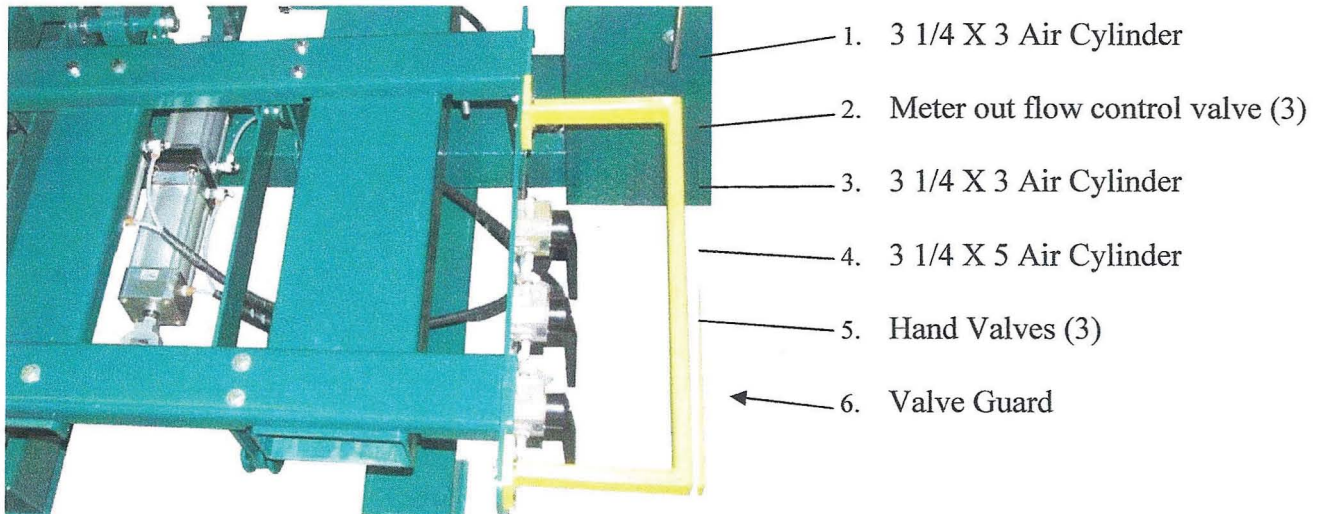
Smart Products
Block Pallet Prep
Blade Guide Assembly (2)



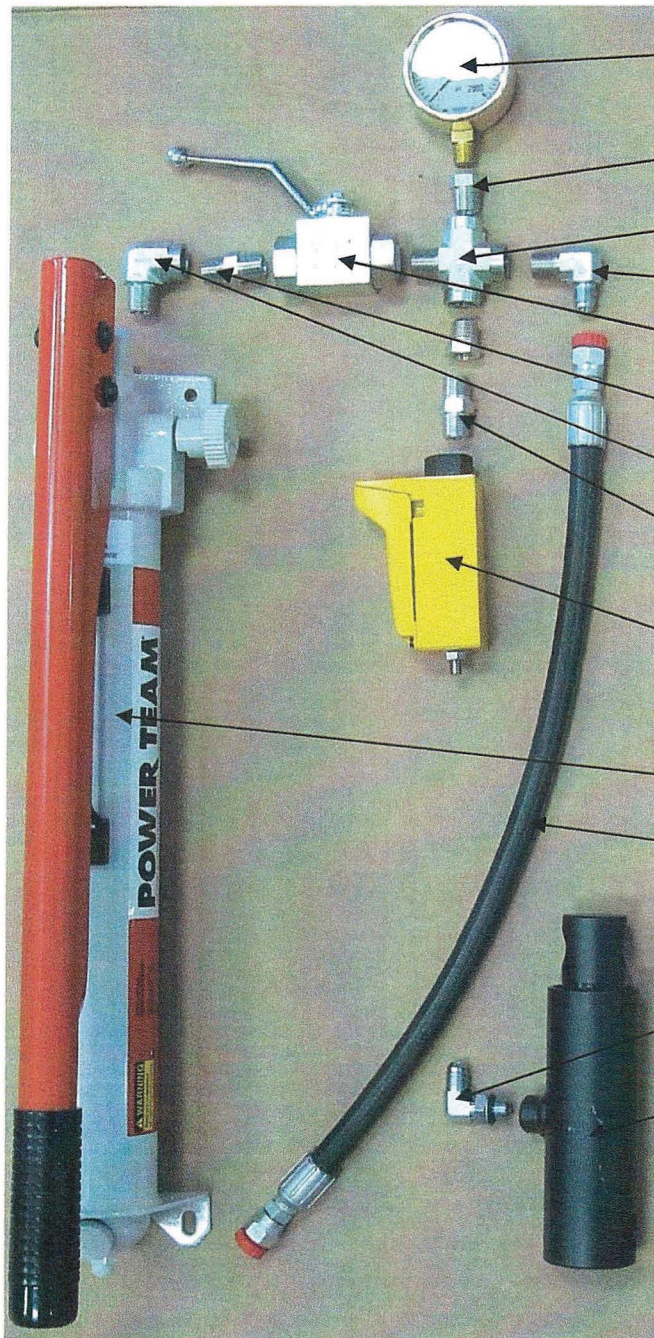
Smart Products

Block Pallet Prep Machine

Air Cylinders and Valves



Smart Products
BLOCK PALLET PREP
Blade Tensioning System



1. Pressure Gauge

2. Reducer

3. Cross Fitting

4. Pipe to Flare 90

5. Ball Valve

6. Nipple 3/8—3/8

7. Street L

8. Nipple 1/4—1/4

9. Pressure Switch

10. Pump

11. Hose

12. Flare to O-ring

13. Cylinder

Smart Products

Block Pallet Prep

Electrical Panel

1. Stop Button

2. LED

3. Start Button

4. Fuse Block

5. Fuses

6. Disconnect

7. Terminal Strip

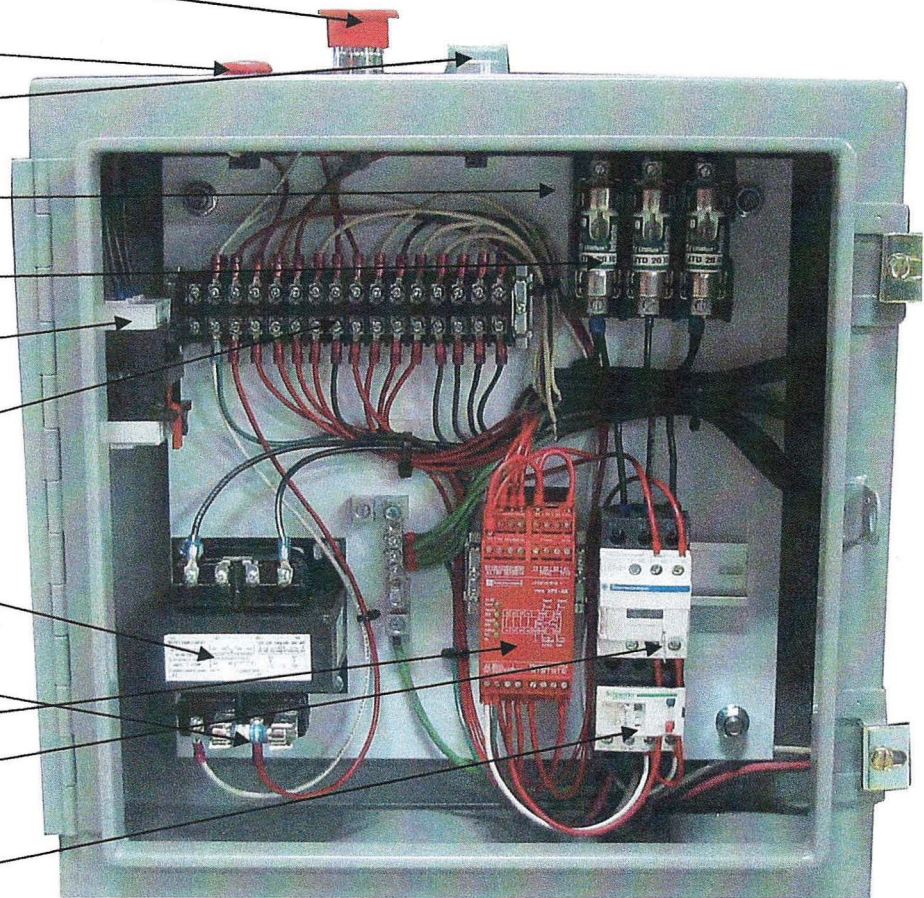
8. Transformer

9. fuse

10. Monitoring Safety Relay

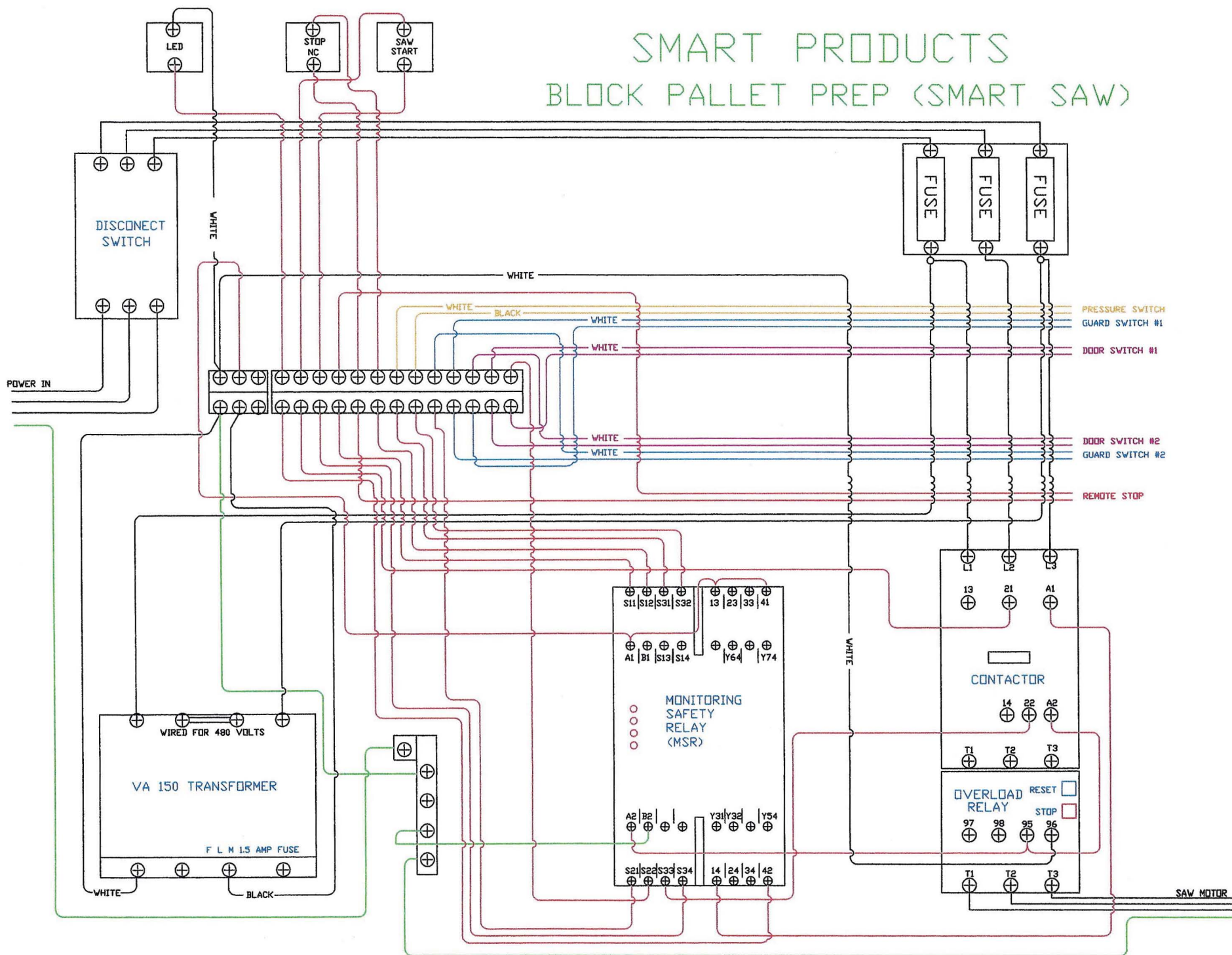
11. Contactor

12. Overload Relay



SMART PRODUCTS

BLOCK PALLET PREP (SMART SAW)



Smart Products - "Block Pallet Prep (BPP)" Machine Band Saw Blade Information

Description:	M42 Band, Bi-Metal Blade
Length:	20 Feet
Width:	1-1/4" Wide
Thickness:	.042" Thick
"Set in the Blade":	5-8 V/P

**Smart Products - "Block Pallet Prep (BPP)" Machine
Schedule of Common Spare Parts (Per Machine)**

QUANTITY	PART DESCRIPTION	PRICE/ UNIT	EXTENDED VALUE
2	Guide Plate	\$ 20.00	\$ 40.00
8	Guide Bearing	\$ 10.00	80.00
4	T - Bushing (i.e., Guide Bearing Insert)	\$ 10.00	40.00
2	Door Latch	\$ 10.00	20.00
1	Wheel Assembly	\$ 95.00	95.00
1	Tire	\$ 80.00	80.00
1	Hydraulic Pressure Gauge	\$ 60.00	60.00
1	Hydraulic Valve	\$ 45.00	45.00
1	2 - Position Air Valve (for Table Raise & Lower)	\$ 95.00	95.00
3	Exhaust Muffler (for 2 - Position Air Valve)	\$ 3.00	9.00
1	Perimeter Guard Gas Spring	\$ 25.00	25.00
10	1/4" Plastic Air Line	\$ 0.50	5.00
3	Air Line "Elbow"	\$ 4.00	12.00
1	Air Line "T"	\$ 5.00	5.00
1	Air Line "Meter Out Flow Control" Valve	\$ 20.00	20.00
1	Handle Assembly for Disconnect Switch	\$ 18.00	18.00
1	Contactora (for 10 HP, 480 Volt Electric Motor)	\$ 100.00	100.00
1	Overload (for 10 HP, 480 Volt Electric Motor)	\$ 60.00	60.00
3	20 Amp "Time Delay" Fuse (for Fuse Block)	\$ 12.00	36.00
1	"Secondary" Transformer Fuse - 1.5 Amp - 250 Volt	\$ 5.00	5.00
1	150 VA "Control Voltage" Transformer	\$ 90.00	90.00
1	Red "Push/Pull" Stop Button Complete	\$ 60.00	60.00
1	Green Start Button Complete	\$ 50.00	50.00

TOTAL

\$ 1,050.00

Prices Subject to Change Without Notice