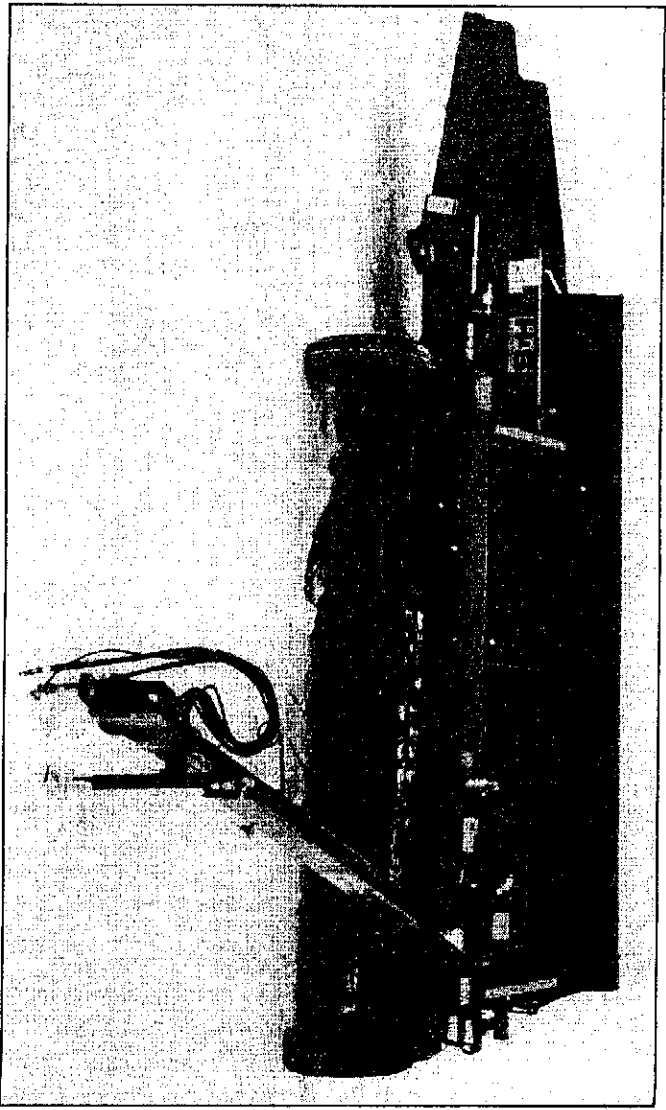


# H&S WINDROW MERGER



**WARNING**

READ AND UNDERSTAND THIS MANUAL  
BEFORE OPERATING THIS EQUIPMENT.

UNSAFE OPERATION OR MAINTENANCE OF THIS EQUIPMENT CAN RESULT IN SERIOUS  
INJURY OR DEATH.

**PARTS & OPERATOR'S  
INSTRUCTIONS**

3-2-2001

Manufactured By

**H&S MANUFACTURING CO., INC.**

P.O. BOX 768 • (715) 387-3414 FAX (715) 384-5463

MARSHFIELD, WISCONSIN 54449

# H&S WINDROW MERGER

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# WARRANTY

## Mr. Owner: Before Operating—Read and Understand Operating and Safety Instructions

H&S Manufacturing Co., Inc. truly believes you have made a wise choice and a sound and lasting investment. Many years of development have made available these quality machines to assure you the performance and reliability you need. We ask you to read the following agreement and warranty as this unit is subject to this warranty and agreement and no other.

### THE H&S WARRANTY

H&S Manufacturing Co., Inc. warrants this unit to be free from breakage or malfunctions due to defects in material and or workmanship for a period of one year from date of original sale on parts and limited labor, two years parts. Should such breakage or malfunction occur within warranty period the liability of H&S, its employees, agents, authorized distributors, and dealers (hereinafter collectively referred to as sellers) is hereby expressly limited to repairing or, at its option, replacing free of charge at its factory, any such defective part or parts. Sellers liability is further expressly limited with respect to components manufactured by others, such as universal joints, bearings, detachable link and roller chains, tires, belts or trade accessories, to the extent of such warranties as are extended thereon to sellers by these manufacturers.

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR APPLICABLE FOR ANY PARTICULAR PURPOSE, AND THE OBLIGATION AND LIABILITY OF SELLERS UNDER THIS WARRANTY, DOES NOT EXTEND TO LOSS OF CROPS, LOSS BECAUSE OF DELAY IN HARVESTING OR ANY EXPENSE OR LOSS INCURRED FOR LABOR, SUPPLIES, SUBSTITUTE MACHINERY OR RENTAL MACHINERY, TRANSPORTATION OR OTHER CHARGES, OR ANY OTHER INDIRECT OR CONSEQUENTIAL LOSS.**

H&S Mfg. Co., Inc. reserves the right to make changes in design and components or material or to utilize available materials which it deems satisfactory, in order to improve its products. Also H&S reserves the right to make changes in the construction or design of any parts without any incurring obligations to install these improvements or changes on previously delivered units.

This warranty shall be void if any part or parts not manufactured or supplied by H&S are used either in servicing and maintaining the unit, and sellers obligation to repair or replace parts are then voided. This warranty shall be void if in the judgement of H&S, repairs are made in such a manner to affect this unit in a materially adverse manner or if this unit is operated unsafely or while in a state of disrepair.

The terms and conditions of this warranty cannot be altered, modified, or waived by any seller without the expressed, written consent of an officer of H&S Mfg. Co., Inc.

#### NOTICE

H&S Manufacturing Co., Inc. disclaims any liability for the operation of the equipment with the safety guards removed or modified. The nature of this product requires that it be operated in a safe way only, and in good repair by qualified persons. Each purchaser, through the process of purchasing this equipment, agrees with H&S Manufacturing Co., Inc. to operate it in a safe manner and in accordance with applicable state and federal laws and agrees to indemnify and hold harmless H&S Manufacturing Co., Inc. from any loss to any person or persons caused by purchaser's failure to do so. Each purchaser further agrees to bring to the attention this notice to each subsequent purchaser, and to obtain his agreement thereto as a condition of resale or transfer.

#### IMPORTANT

**TO MAKE THIS WARRANTY EFFECTIVE, THE OWNERS WARRANTY REGISTRATION FURNISHED WITH EACH MACHINE MUST BE FILLED OUT AND SENT TO H&S MANUFACTURING CO., INC. IF PURCHASER DOES NOT ACCEPT THIS WARRANTY AND AGREEMENT, HE MAY RESCIND THE SALE BY NOTIFYING ANY OF THE SELLERS IN WRITING OF THAT FACT WITHIN TEN DAYS FROM DATE OF SALE AND/OR PRIOR TO ANY USE OF THE EQUIPMENT WITHIN THIS 10 DAYS.**

247

### WARRANTY REGISTRATION

Date of Purchase \_\_\_\_\_  
Purchaser \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Product \_\_\_\_\_ Model # \_\_\_\_\_ Serial # \_\_\_\_\_  
Dealer \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

FILL OUT AND MAIL  
IMMEDIATELY TO MAKE  
WARRANTY EFFECTIVE

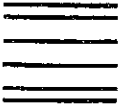


Signature of original buyer

**IMPORTANT!**

Tear on dotted line, provide the information requested on the card. The H&S Warranty is valid "only" after this card is received and recorded at H&S Mfg. Co. Mail at once. No postage is required in the U.S.A.

This Is Your Warranty Card  
Please Fill Out  
And Mail Immediately



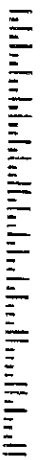
NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**  
FIRST CLASS MAIL Permit No. 195      Marshfield, WI 54449

POSTAGE WILL BE PAID BY ADDRESSEE



H&S Manufacturing Co., Inc.  
PO Box 768  
Marshfield WI 54449-9963



**AFTER COMPLETION, DEALER SHOULD REMOVE AND RETAIN FOR RECORDS**

**H&S  
DEALER PRE-DELIVERY CHECK LIST**

After the Windrow Merger has been completely set-up, check to be certain it is in correct running order before delivering to the customer. The following is a list of points to inspect. Check off each item as you have made the proper adjustments and found the item operating satisfactorily.

- All shields and guards are in place and fastened.
- All grease fittings have been lubricated - See lubrication guide in this manual.
- All mechanisms are operating trouble free.
- Belts and drive chains properly adjusted.
- All bolts and fasteners are tight.
- All decals are in place and legible.

\_\_\_\_\_  
(Dealer's Name)

\_\_\_\_\_  
Model Number

\_\_\_\_\_  
Serial Number

\_\_\_\_\_  
(Signature of Pre-Delivery Inspector)

\_\_\_\_\_  
(Inspection Date)

**DEALER DELIVERY CHECK LIST**

This check list that follows is an important reminder of valuable information that should be passed on to the customer at the time this Windrow Merger is delivered.

Check off each item as you explain it to the customer.

This pre-delivery check list, when properly filled out and signed assures the customer that the pre-delivery service was satisfactorily performed.

- Explain to the customer that the pre-delivery inspection was made.
- Explain to the customer all the safety precautions they must exercise when operating this unit.
- Explain to customer that regular lubrication is required for proper operation and long life of machine. Show customer the lubrication section of Owner's Manual.
- Give the customer Owner's Manual and make sure he reads and understands all operating and service instructions.
- Record Serial Number on Page 20 of this Manual.
- Have customer sign a completed "Warranty Registration," and mail it promptly.

Date Delivered \_\_\_\_\_ Dealer's Name \_\_\_\_\_

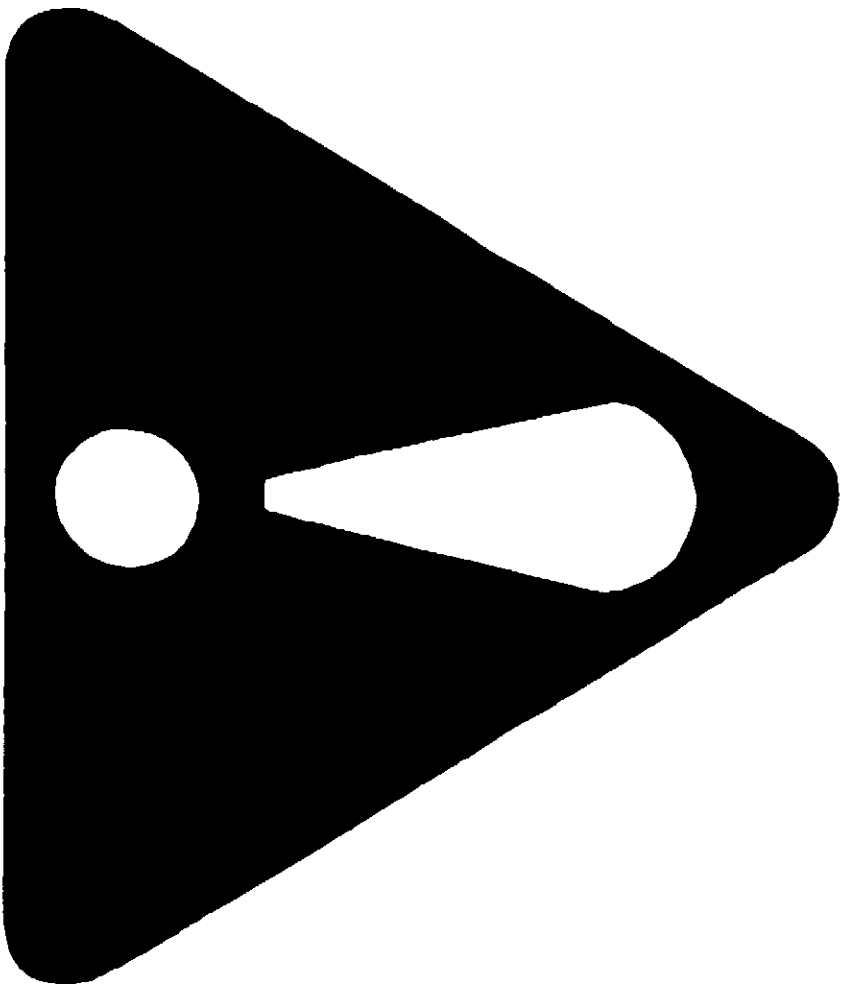
By \_\_\_\_\_

\_\_\_\_\_  
Signature of Original Buyer

Note: Warranty is not valid until warranty card is completed and returned to H&S Mfg. Co., Inc.

(Remove Dealers File Copy At Perforation)





**BE  
ALERT!  
YOUR SAFETY  
IS INVOLVED.**

THIS SYMBOL IS USED THROUGHOUT THIS BOOK WHENEVER YOUR PERSONAL SAFETY IS INVOLVED. TAKE TIME TO BE CAREFUL. REMEMBER: THE CAREFUL OPERATOR IS THE BEST OPERATOR. MOST ACCIDENTS ARE CAUSED BY HUMAN ERROR. CERTAIN PRECAUTIONS MUST BE OBSERVED TO PREVENT THE POSSIBILITY OF INJURY OR DAMAGE.

**TRACTORS**

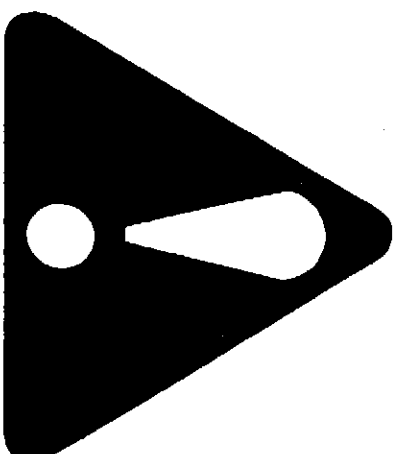
This operator's manual uses the term "Tractor" when identifying the power source.

**H&S MANUFACTURING CO. INC.**

## RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



## UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

Safety signs with signal word DANGER or WARNING are typically near specific hazards.

General precautions are listed on CAUTION safety signs.



**WARNING**



**CAUTION**

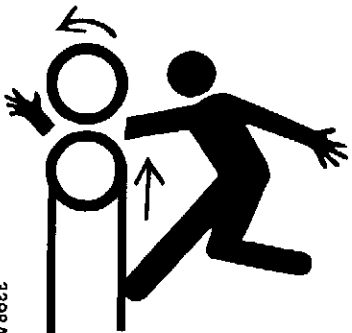


## FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual, and all safety signs on your machine. Follow all recommended precautions and safe operating procedures.

Keep signs in good condition. Immediately replace any missing or damaged signs.



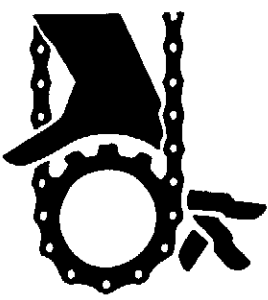


3398A

## ⚠ DANGER

**STAY CLEAR OF  
MOVING PARTS**

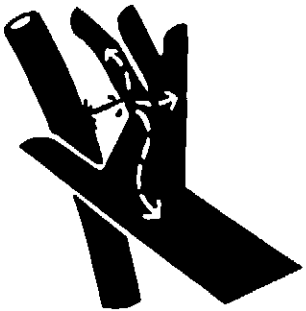
FAILURE TO HEED THIS  
WARNING MAY RESULT IN  
PERSONAL INJURY OR DEATH  
KEEP CLOTHING, YOURSELF  
AND OTHERS WELL CLEAR.



## ⚠ WARNING

**DO NOT  
REMOVE  
SHIELDS  
MOVING  
PARTS  
INSIDE**

1494K



## ⚠ WARNING

### DO NOT GO NEAR LEAKS

- High pressure oil easily punctures skin causing serious injury, gangrene or death.
- If injured, seek emergency medical help. Immediate surgery is required to remove oil.
- Do not use finger or skin to check for leaks.
- Lower load or relieve hydraulic pressure before loosening fittings.

11599

## ⚠ DANGER

**SHUT ENGINE COMPLETELY OFF BEFORE  
ADJUSTING OR SERVICING MACHINE.**

**MACHINE MAY START UNEXPECTEDLY**

**FAILURE TO HEED THIS WARNING MAY RESULT  
IN PERSONAL INJURY OR DEATH**

3398C

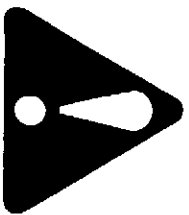
## ⚠ WARNING

### HELP AVOID INJURY

- READ & UNDERSTAND THE OPERATORS MANUAL PROVIDED WITH THIS MACHINE. IF MISPLACED CALL H & S MANUFACTURING AT: 715-387-3414 WITH MODEL AND SERIAL NUMBER.
- UNDERSTAND ALL SAFETY WARNINGS AND FUNCTION OF CONTROLS.
- KEEP SAFETY DEVICES IN PLACE AND WORKING.
- KEEP YOURSELF AND OTHERS WELL CLEAR OF MOVING PARTS.
- DISCONNECT ALL POWER BEFORE SERVICING OR CLEANING THIS MACHINE.

5896A

## H&S WINDROW MERGER



# W A R N I N G

### TO PREVENT SERIOUS INJURY OR DEATH

BEFORE YOU ATTEMPT TO OPERATE THIS EQUIPMENT, READ AND STUDY THE FOLLOWING INFORMATION. IN ADDITION, MAKE SURE THAT EVERY INDIVIDUAL WHO OPERATES OR WORKS WITH THIS EQUIPMENT, WHETHER FAMILY MEMBER OR EMPLOYEE, IS FAMILIAR WITH THESE SAFETY PRECAUTIONS.

KNOW HOW TO STOP MACHINE BEFORE STARTING IT.

If the machine becomes clogged, disengage the tractor hydraulics. Stop the tractor engine and allow all mechanisms to stop before cleaning or working on the machine.

**DO NOT** attempt to perform maintenance or repair with tractor running or tractor hydraulics engaged.

**DO NOT** step up on machine at any time.

**NEVER** manually feed material into the pickup.

**DO NOT** allow minors to operate or be near the machine.

**DO NOT** ALLOW PERSONNEL OTHER THAN THE QUALIFIED OPERATOR NEAR THE MACHINE.

**STAY CLEAR** of machine when raising or lowering pickup or extension and positioning pole.

Keep hands, feet, and clothing away from pickup and conveyor belts **WHEN THEY ARE IN MOTION.**

Loose or floppy clothing should not be worn by the operator.

Be sure the machine is clear of people, tools, and other objects before engaging tractor hydraulics.

**NEVER** start Windrow Merger until all guards and safety shields are secured in place.

**DO NOT** adjust speed of pickup or conveyor belts when tractor is running or hydraulics are engaged.

**STAY CLEAR** of hydraulic lines. They may be under extreme pressure or heat.

H&S Mfg. Co. always takes the operator and his safety into consideration and guards exposed moving parts for his protection. However, some areas cannot be guarded or shielded in order to assure proper operation. In addition, the operators manual and decals on the machine itself warn you of further danger and should be read and observed closely.

### Study The Above Safety Rules

**ATTENTION - BE ALERT - YOUR SAFETY IS INVOLVED**

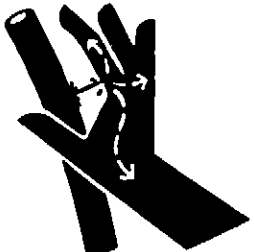
## OPERATION

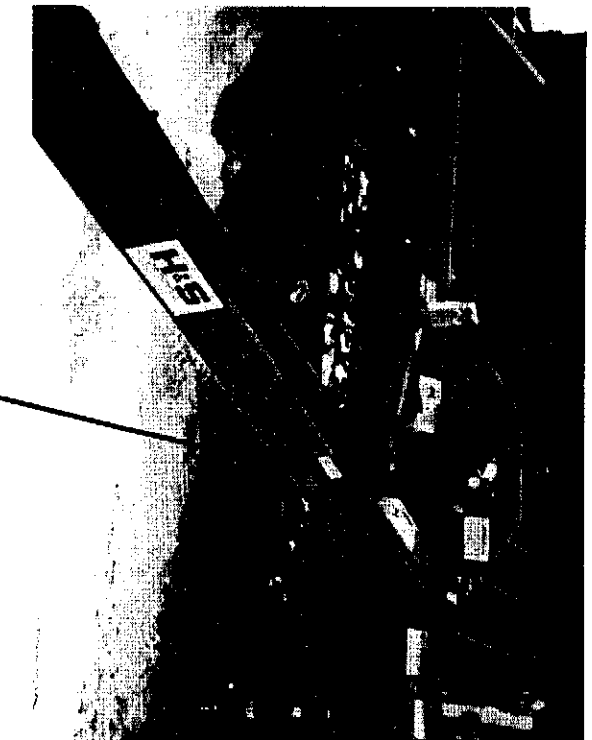
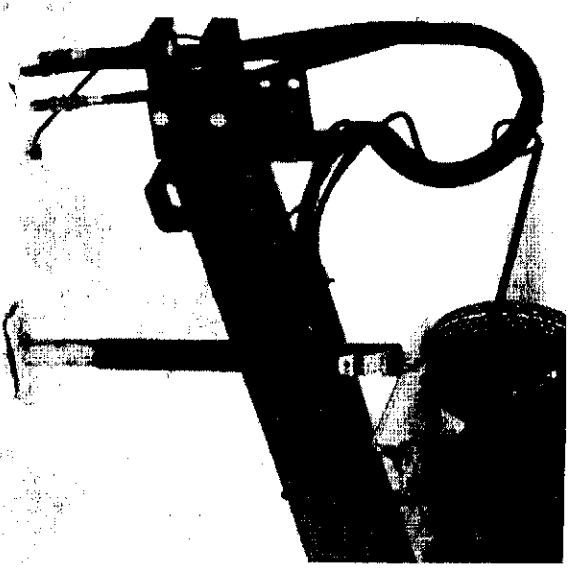
1. Check entire unit carefully before first operation. Tighten bolts, set screws, and chains that might have come loose in handling. Lubricate as explained in the lubrication guide.
2. Adjust tractor hitch to allow for level merger cross conveyor and attach merger to tractor with a hitch pin that has a safety locking device.
3. Check tires and inflate to recommended pressure.
4. Remove weight from lift jack and move to storage position.
5. Connect hydraulic hoses.
6. Connect electrical leads from control box to tractor electrical power source. Position control box in a convenient place on the tractor.
7. Run pickup and conveyor for several minutes to ensure proper assembly and lubrication. Successful operation will be achieved by periodic adjustments and experience of the operator. Make sure to read and understand all adjustments.

## ADJUSTMENTS

### HITCH

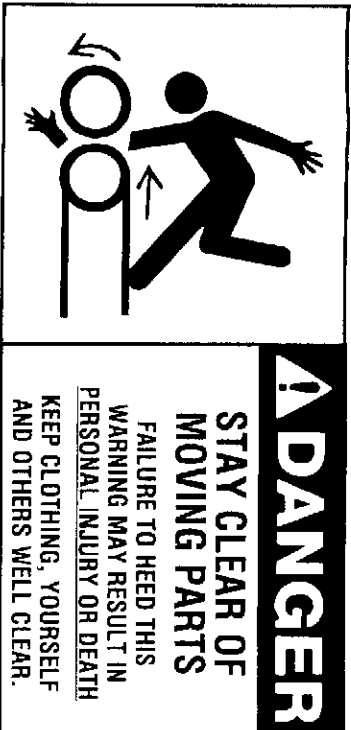
There are three different positions to adjust the hitch on your new merger. Hitch should be adjusted so cross conveyor is level to the ground.

	<p><b>⚠ WARNING</b></p> <p><b>DO NOT GO NEAR LEAKS</b></p> <ul style="list-style-type: none"><li>• High pressure oil easily punctures skin causing serious injury, gangrene or death.</li><li>• If injured, seek emergency medical help. Immediate surgery is required to remove oil.</li><li>• Do not use finger or skin to check for leaks.</li><li>• Lower load or relieve hydraulic pressure before loosening fittings.</li></ul>
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Jack Storage

## ADJUSTMENTS (Continued)



### TRANSPORT LOCKS

There are two transport locks on the merger (three if equipped with optional extension). **All locks should be used when transporting the unit**, and must be in storage position when operating the merger. Pickup transport lock is located at the pickup cylinder on the left side of the merger.



Transport Position



Operational Position

Pole transport lock is located under the cylinder which controls the position of the pole.



Transport Position

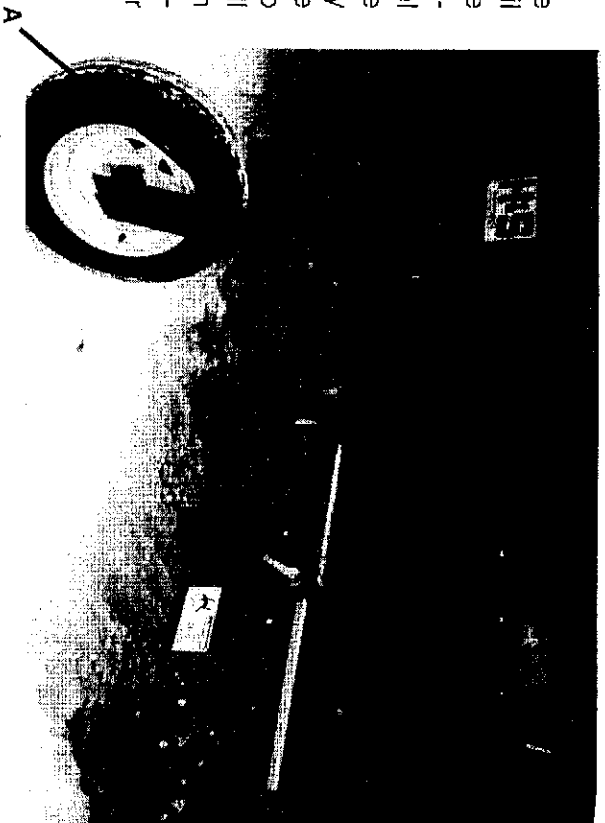


Operational Position

## ADJUSTMENTS (Continued)

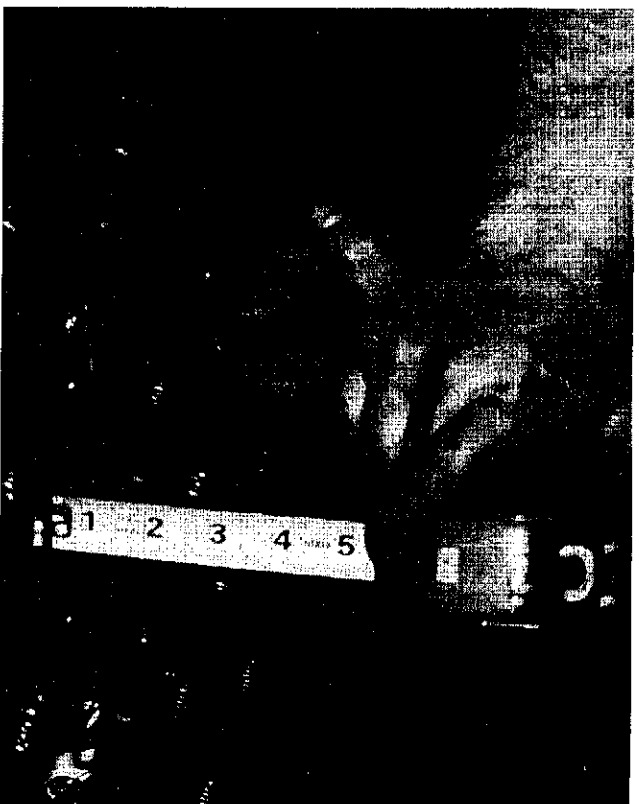
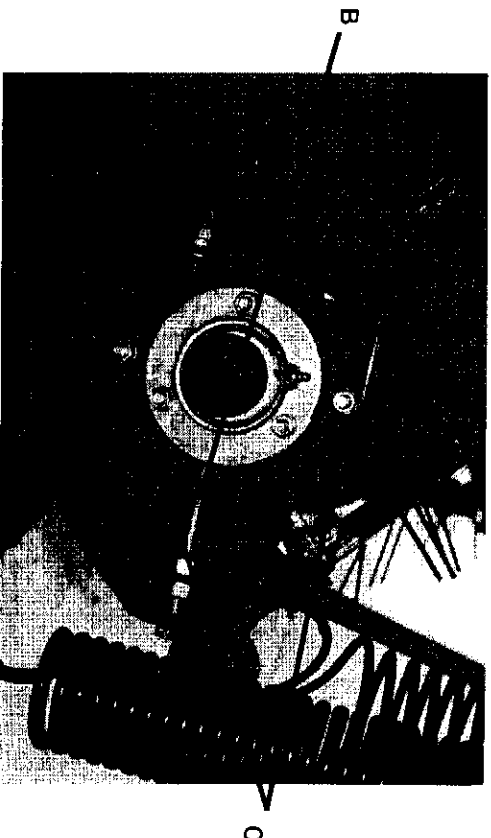
### TAIL WHEEL

The tail wheel is located at the right rear of the merger. The tail wheel provides support for the conveyor and optional extensions. Located on the tail wheel pivot spindle is an adjustable brake assembly. Adjust brake by tightening bolt (A). The brake should have enough tension to prevent zig-zag motion, but still allow the wheel to pivot when making corners. Improper adjustment will cause severe tire wear and damage to Merger.



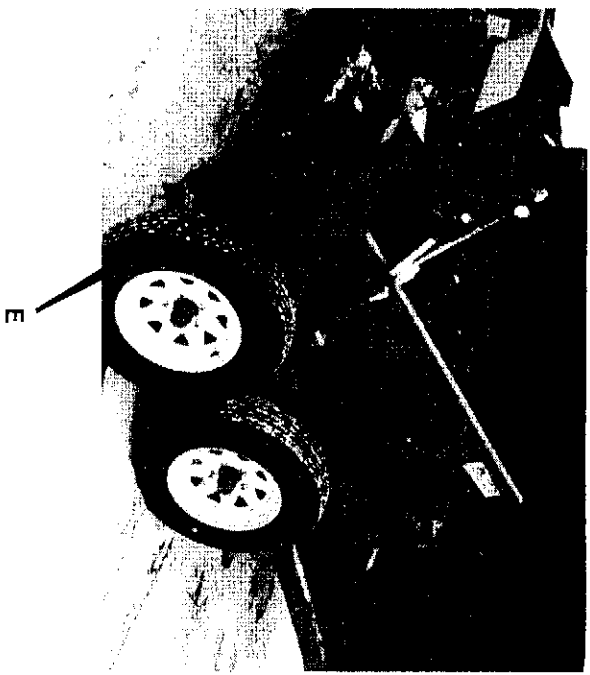
### PICKUP ADJUSTMENTS

1. Pickup belts may be adjusted by tightening the take up bolt (B) located on both ends of the pickup. The flange bearing bracket bolts (C) must be loosened before adjustment, and tightened after the desired belt tension is attained. Proper belt tension will be achieved when 1-1/2" of slack can be pulled in the center of the two outside belts with minimal resistance. **DO NOT** tighten pickup belts excessively. Overtightening may cause damage to belts or rollers. Loose belts will cause unnecessary tooth wear and breakage.



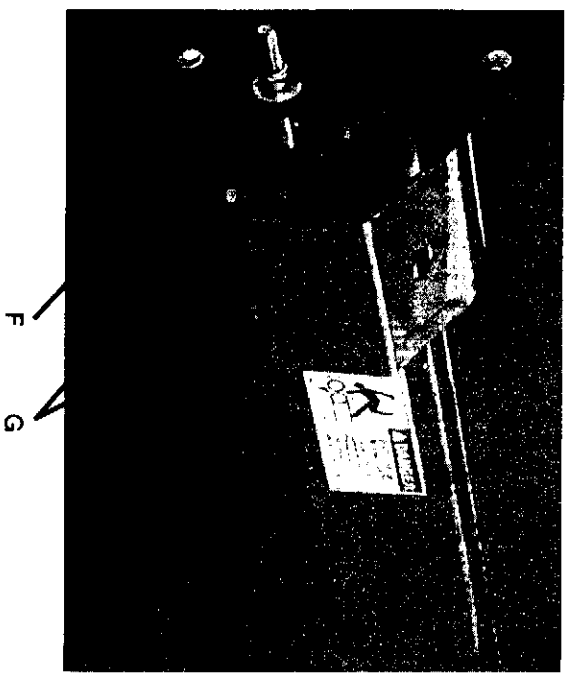
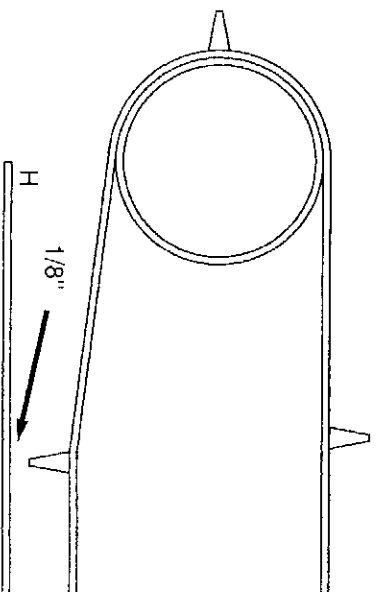
## ADJUSTMENTS (Continued)

2. Pickup height may be adjusted by sliding the pickup height adjusting brackets, located on both ends of pickup near front of the merger. Loosen bolts (E), slide adjustment brackets to desired height and retighten bolts. Teeth should run  $1/2$ " above the ground. Excessive tooth wear and breakage will occur if teeth are touching the ground. Adjust both sides equally. During operation, pickup should be lowered completely (cylinder retracted) so the adjustment brackets rest on the rubber bumpers on the front of the tandem beam. This allows pickup to follow contour of ground with tandems. Pickup down pressure is controlled by the two inside springs on the pickup. Down pressure is factory set at approximately 30 lbs. If spring is removed or replaced, reset to this pressure.



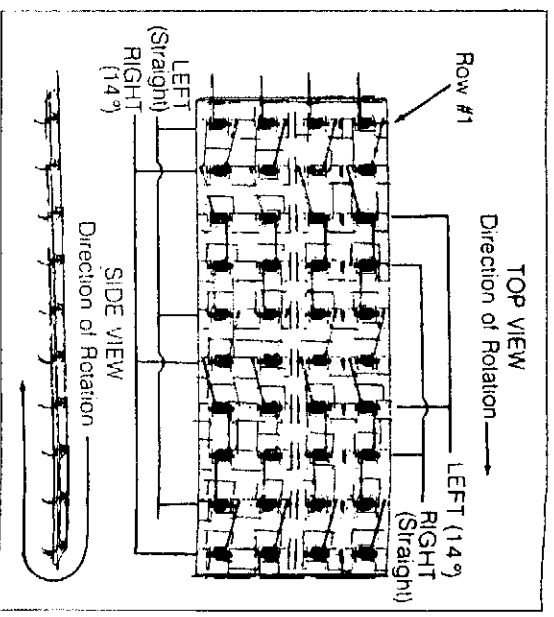
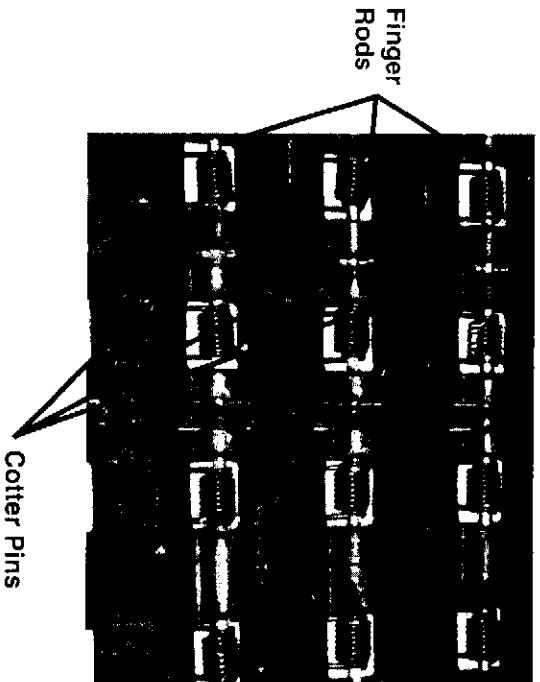
### CONVEYOR ADJUSTMENTS

The cross conveyor belt tension can be adjusted by tightening the take up bolts (F) located on both ends of the roller, opposite the discharge end of the conveyor. Loosen two bolts (G) holding each pillow block bearing, on both ends of the roller. Tighten bolts (F) until first flight of conveyor is approximately  $1/8$ " off the return guides (H), when belt is positioned as shown. Retighten bolts (G) holding bearings.



## REPLACING APRON FINGERS

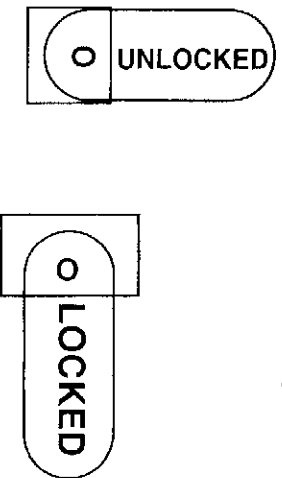
The pickup aprons are equipped with four types of fingers with a specific arrangement of installation. To replace worn or damaged fingers, remove cotter pin and finger rod. Refer to the illustration for the correct installation pattern of the replacement fingers.



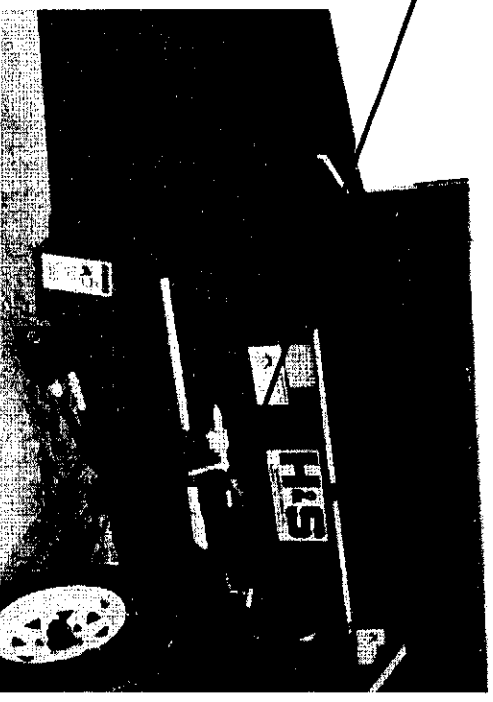
Replacing Apron Fingers

## OPTIONAL EXTENSION ADJUSTMENTS

Extension Transport Lock is located on the cylinder which raises and lowers extension.

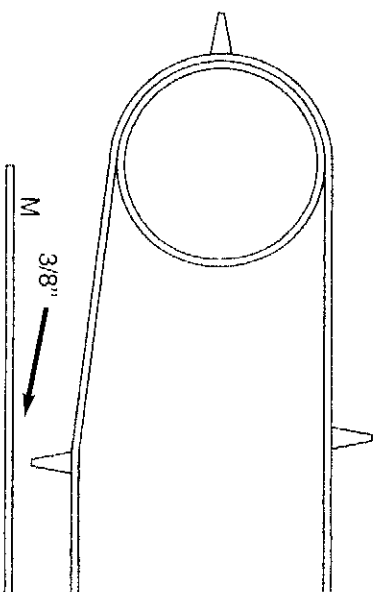


Transport Lock



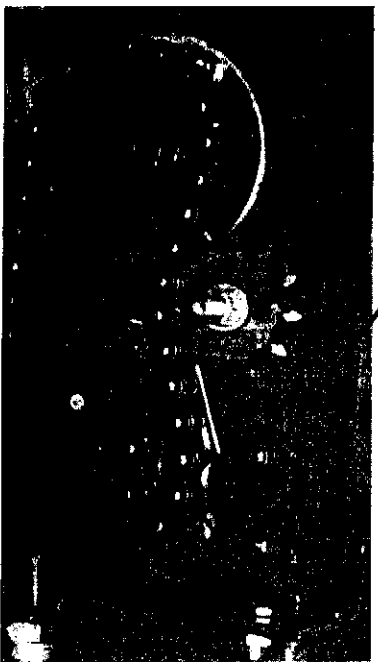
## OPTIONAL EXTENSION ADJUSTMENTS (Continued)

1. The conveyor belt on the optional extension is adjusted on the discharge end of the optional extension. Loosen flange bearing bolts (K) on each end of the extension conveyor roller. Tighten adjusting bolt (L) until first flight of conveyor is approximately 3/8" off return guide (M), when belt is positioned as shown. Retighten the flange bearing bolts once desired tension is reached.



N (Shields Removed for Clarity)

2. The extension drive chain may be tightened by adjusting the tightener sprocket located under the extension shield. Loosen bolt (N), slide the tightener sprocket against the roller chain until there is a slight deflection in the bottom side of the chain between the drive and driven sprockets. Retighten bolt (N). Replace shield prior to operating Merger.



The need for an extension on the discharge cross conveyor is dependant on the cutting width, and where you would like the windrow placed. The following two examples will help you to determine what size extension you will need for your situation.

### 1) Placing Crop on Top of Next Windrow

Take the mower conditioner cutting width and subtract 12', the working width of the windrow merger, that figure will equal the minimum size of the extension that you need.

**Example:**

$$\left( \begin{array}{c} 16' \\ \text{mower} \\ \text{conditioner} \end{array} \right) - \left( \begin{array}{c} 12' \\ \text{mower} \\ \text{conditioner} \end{array} \right) = \left( \begin{array}{c} 4' \\ \text{extension} \\ \text{needed} \end{array} \right)$$

**Note:** To place the crop further onto the windrow, order the next size of extension.

### 2) Placing Crop Along Side of Next Windrow

Take the mower conditioner cutting width and subtract 14' (merger plus 2'), that figure will equal the maximum extension that you need.

**Example:**

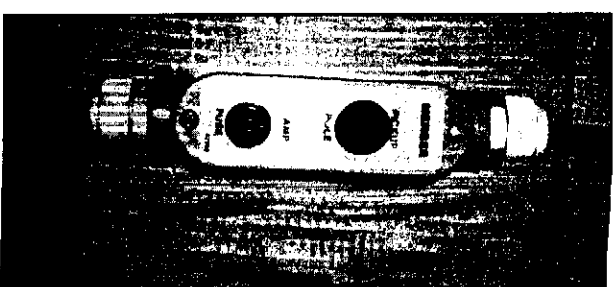
$$\left( \begin{array}{c} 14' \\ \text{mower} \\ \text{conditioner} \end{array} \right) - \left( \begin{array}{c} 14' \\ \text{merger}+2 \end{array} \right) = \left( \begin{array}{c} 0' \\ \text{no extension} \\ \text{needed} \end{array} \right)$$

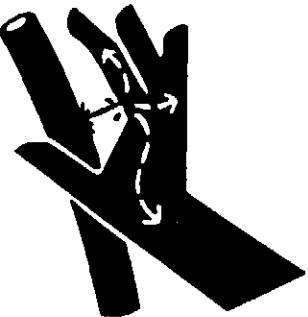


# HYDRAULICS

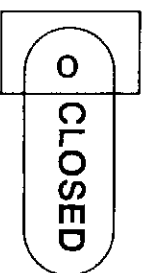
There are four hydraulic hoses from the merger to the tractor. The two smaller, (3/8" diameter) hoses provide oil to the pickup lift cylinder and pole positioning cylinder. Direction of flow is controlled by the electric control box shown. The toggle switch is spring-loaded to return to pickup position. To reposition pole, push toggle switch to pole position and hold. Activate the tractor hydraulic lever until pole is at the desired position. Release hydraulic lever and toggle switch. Tractor hydraulic lever will now raise or lower pickup and extension (if so equipped).

The two larger (1/2" diameter) hoses provide oil to the hydraulic motors running pickup belt and cross conveyor belt. Controlling speed of belts is done by manually moving speed indicator on speed control valve. Coordinate speed of belts with ground speed of tractor. Tooth breakage can be minimized by running the pickup as slow as possible in coordination with ground speed. A flow of 16 GPM and pressure of 2,000 PSI is recommended to operate the merger efficiently.



	<p><b>!WARNING</b></p> <p><b>DO NOT GO NEAR LEAKS</b></p> <ul style="list-style-type: none"><li>• High pressure oil easily punctures skin causing serious injury, gangrene or death.</li><li>• If injured, seek emergency medical help. Immediate surgery is required to remove oil.</li><li>• Do not use finger or skin to check for leaks.</li><li>• Lower load or relieve hydraulic pressure before loosening fittings.</li></ul>
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Located to the left of the speed control valve, behind the shield is a ball valve. This valve should be in the open position for tractors with an "open center hydraulic" system and in the closed position for tractors with a "closed center hydraulic" system such as JOHN DEERE. Consult your tractor operator manual or dealership to determine the type of hydraulic system on your tractor.



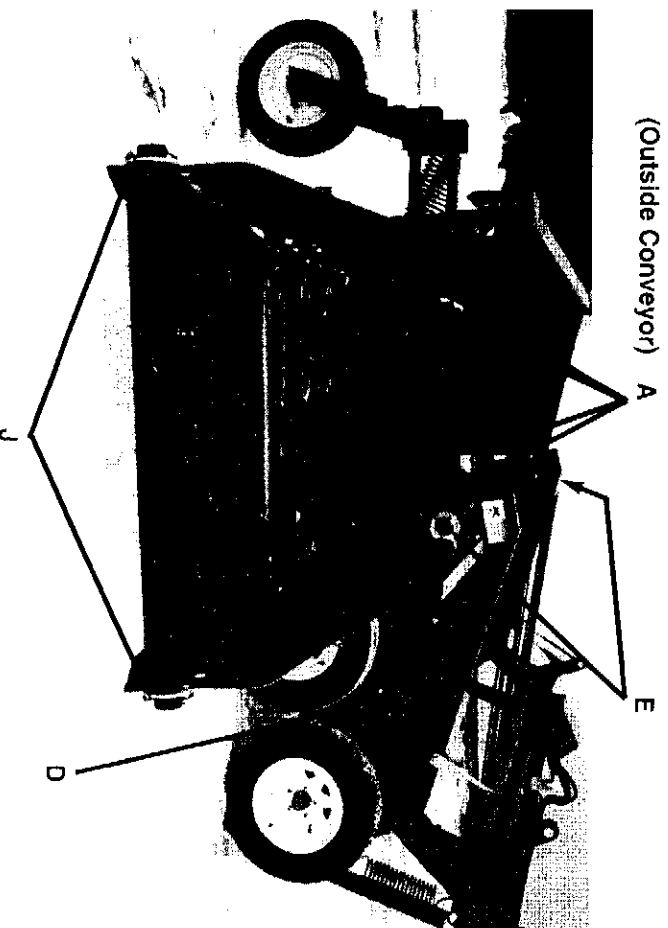
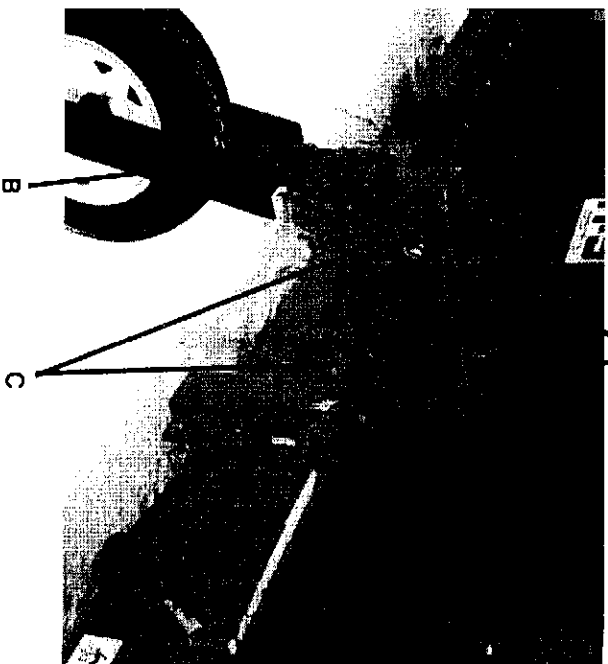
## LUBRICATION

There are 21 grease fittings on your merger. If these are lubricated properly and often enough, it will prolong the life of the merger. Grease daily during normal use, and before and after storage. Use a good grade of high quality grease. Make sure grease comes out around the shaft on sleeve type bearings. On the sealed ball bearings, grease should be added slowly until a slight bead forms at the seals indicating the correct amount of lubricant. Wipe off excess grease to prevent accumulation of grit around the bearings. During normal use oil roller chains daily. Lubricate merger more often with extensive use.

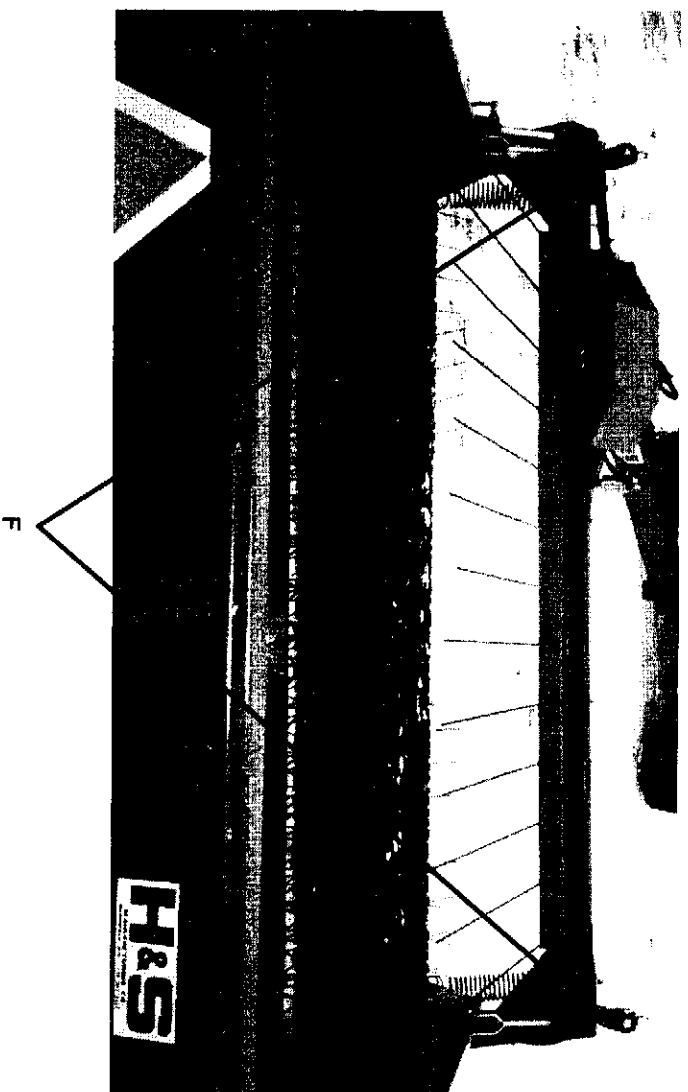
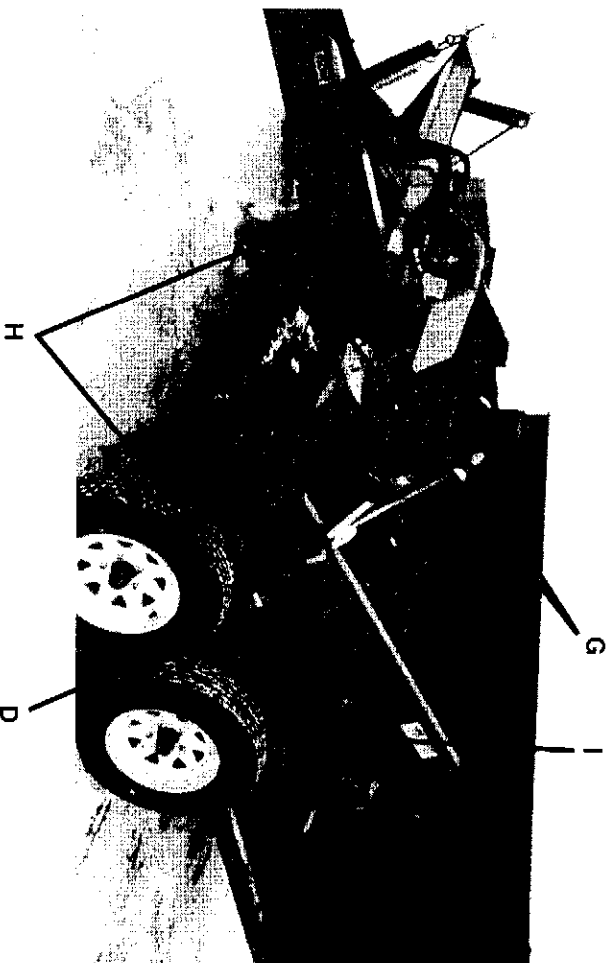
- A. (4) - 1 on each pillow block bearing (outside both ends of cross conveyor)
- B. (1) - 1 on tail wheel pivot tube
- C. (4) - 2 on each tail wheel support arm
- D. (2) - 1 on each walking beam pivot
- E. (2) - 1 on each end pick-up drive shaft (Top)
- F. (2) - 1 on each end lifting linkage pivot
- G. (2) - pole pivot
- H. (2) - 1 on each end of pick-up idler (Bottom)
- I. (2) - 1 on each end pick-up pivot

### OPTIONAL EXTENSIONS

- J. (2) - 1 on each end of drive roller
- (2) - 1 on each end of idler roller
- (1) - on rear mount bracket bearing



# LUBRICATION (Continued)



## DECAL LOCATION

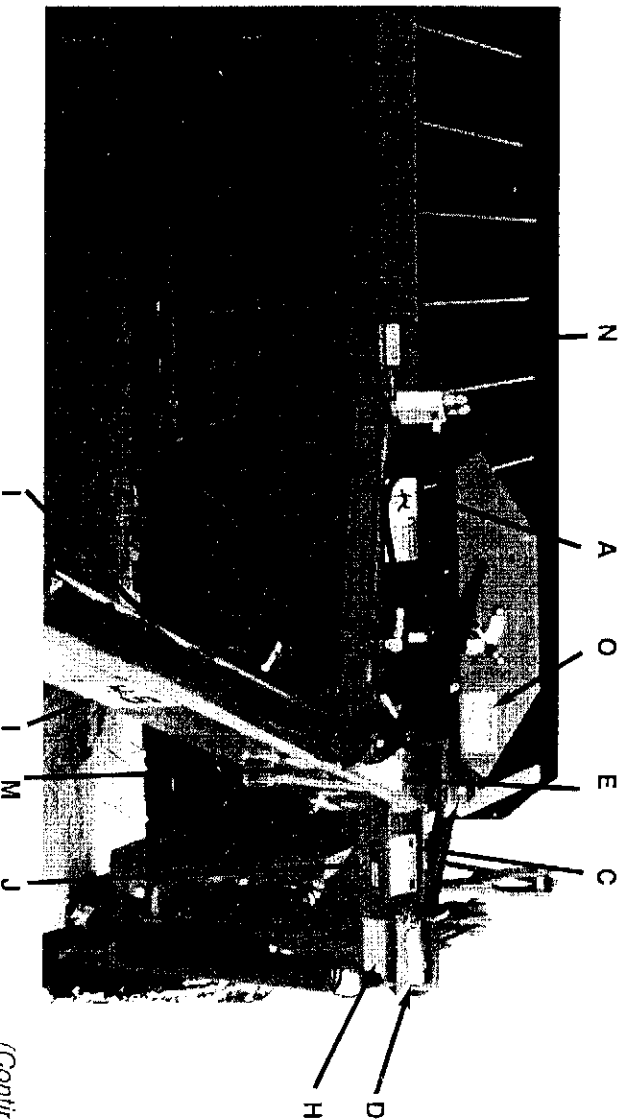
Your H&S Windrow Merger was manufactured with operator safety in mind. Located on the windrow merger are various decals to aid in operation, and warn of danger or caution areas. Pay close attention to all the decals on your windrow merger.



**DO NOT REMOVE ANY OF THESE DECALS. IF DECALS ARE LOST, DAMAGED, OR IF WINDROW MERGER IS REPAINTED, REPLACE DECALS. REMEMBER: DECALS ARE FOR YOUR PROTECTION AND SAFETY.**

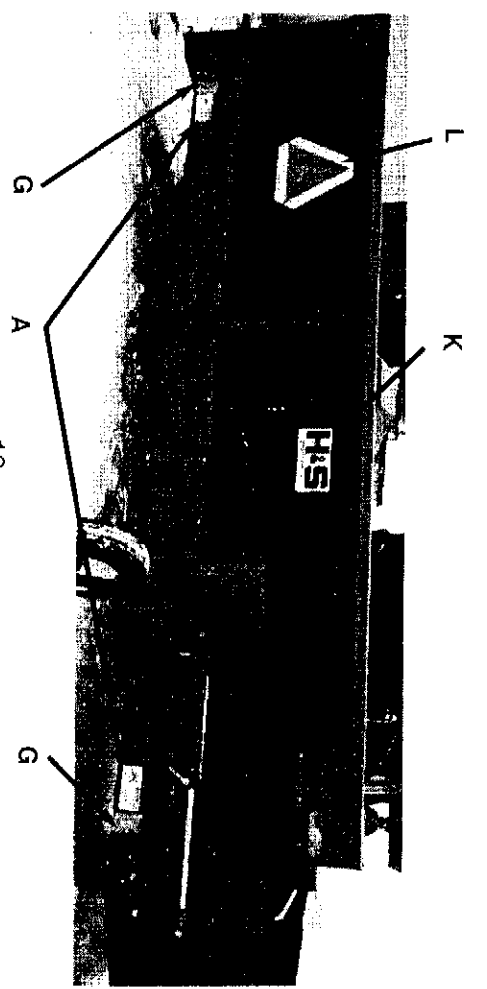
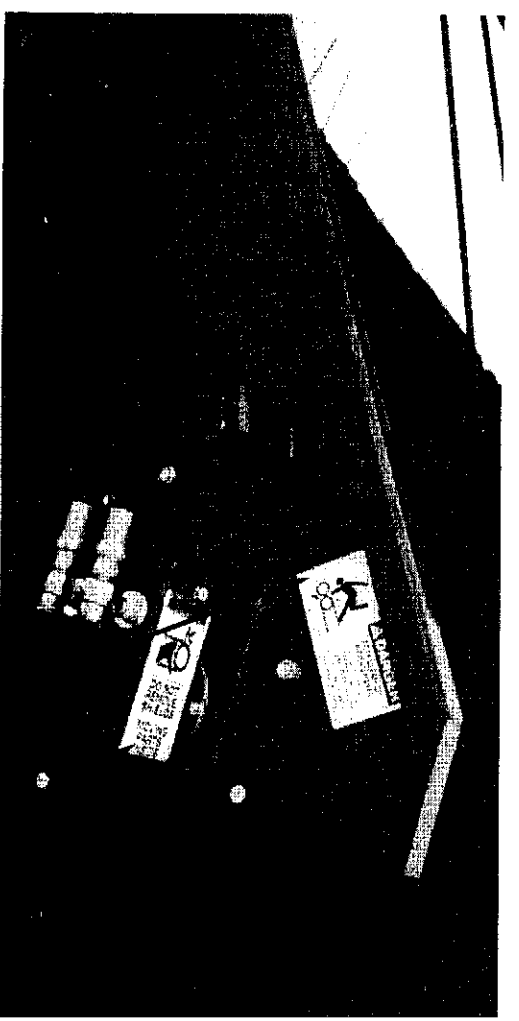
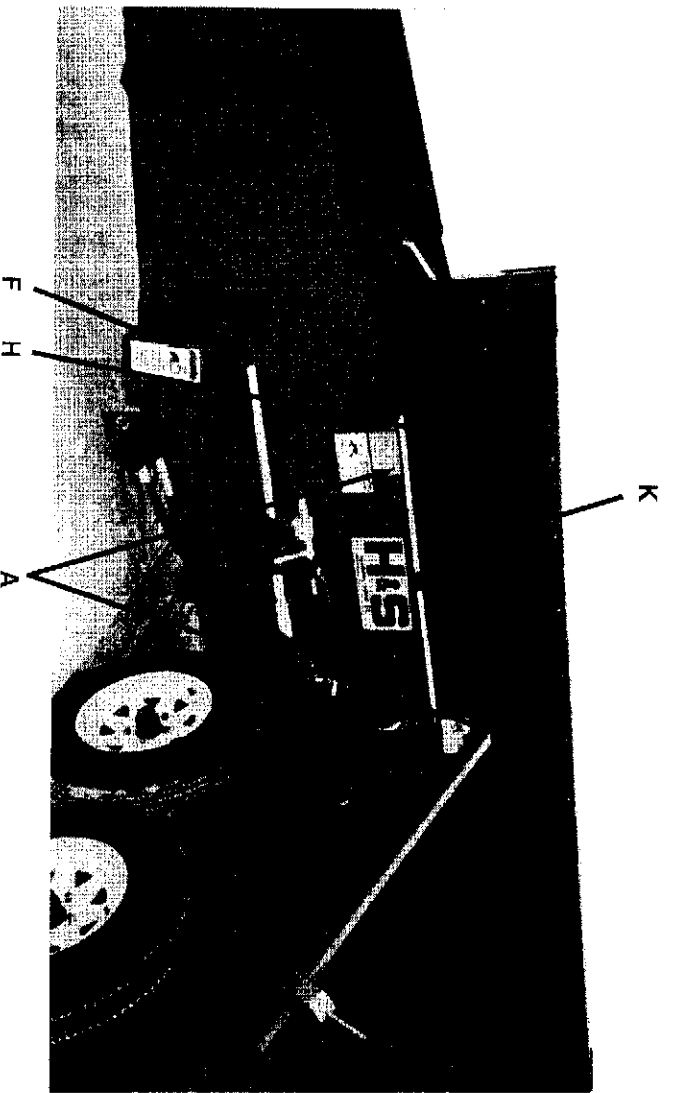
Listed below are the decals on your Windrow Merger. These decals may be ordered individually by part number or by ordering a complete set.

ITEM	PART NO.	DESCRIPTION
A.	3398A	(6) Danger - Stay Clear of Moving Parts
C.	3398C	Danger - Shut Engine Completely Off
D.	5896A	Warning - Help Avoid Injury
E.	11599	Warning - Do Not Go Near Leaks
F.	1494K	(2) Warning - Do Not Remove Shields
G.		(2) Red Reflector
H.		(2) Amber Reflector
I.	B10	(2) H&S Decal
J.		Serial Number
K.		(2) H&S Decal (6" x 12")
L.		SMV Decal
M.		Jack Storage Position
N.	1787I	Patent Pending
O.	111199	Attention - Closed Center Hydraulic
	12600WMerge	Complete Set of Decals
Paint - H&S Red		
	ZX21	Gallon
	ZX22	Quart
	ZX23	Pint



(Continued)

DECAL LOCATION (Continued)



## INSTRUCTIONS FOR ORDERING PARTS

All service parts should be ordered through your authorized H&S dealer. He will be able to give you faster service if you will provide him with the following.

1. Model & Serial Number - Both can be located on the front, left main frame of your unit.
2. All reference to left or right apply to the machine as viewed from the rear.
3. Parts should not be ordered from illustration only. Please order by complete part number.
4. If your dealer has to order parts - give shipping instructions.

VIA truck - large pieces (please specify local truck lines)

VIA United Parcel Service (include full address)

<b>H&amp;S Mfg. Co.</b>
MARSHFIELD, WIS.
MOD. NO. <input type="text"/>
SER. NO. <input type="text"/>

PLEASE RECORD NUMBERS FOR YOUR UNIT FOR QUICK REFERENCE

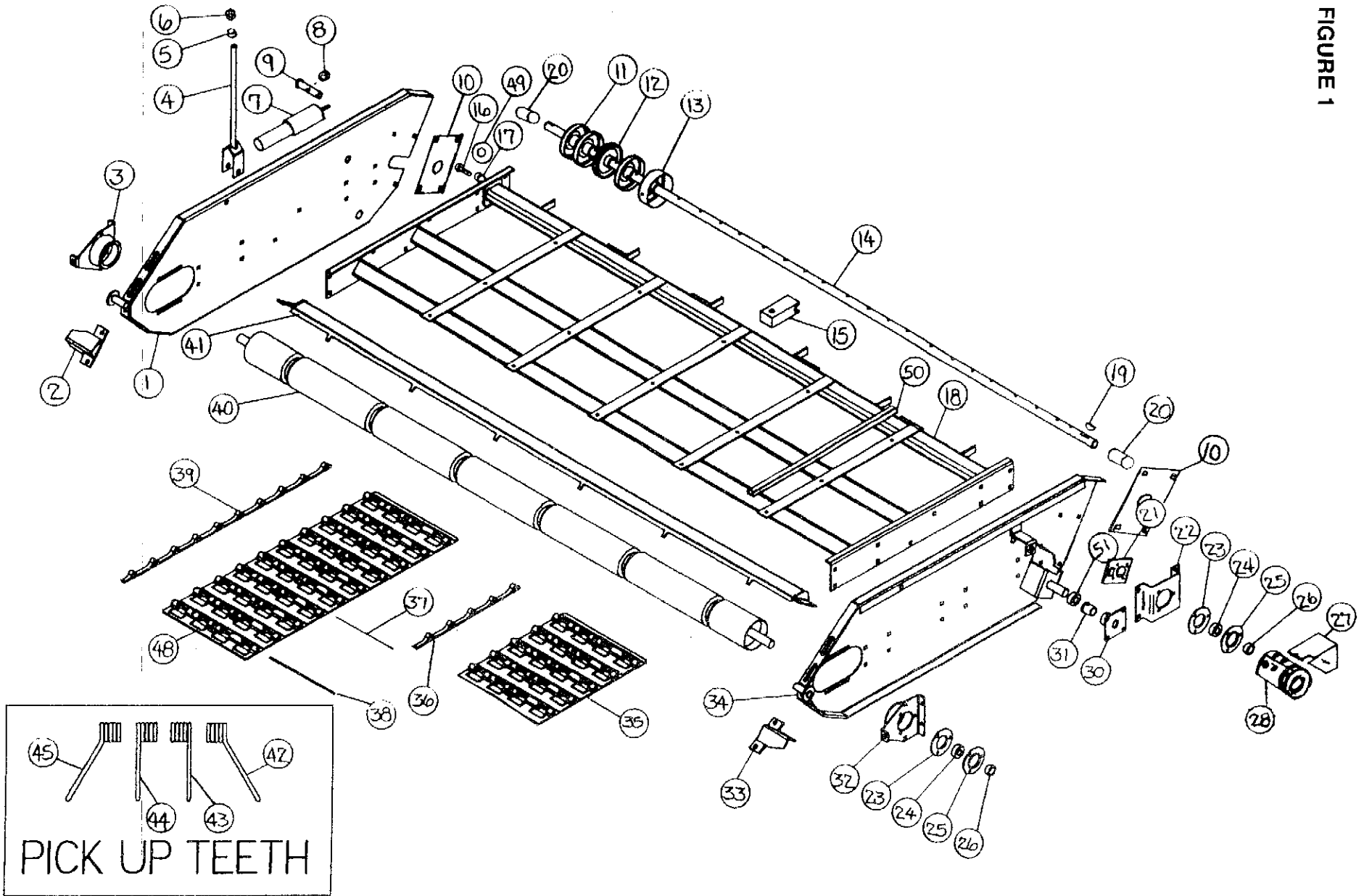
### ABOUT IMPROVEMENTS

H&S IS CONTINUALLY STRIVING TO IMPROVE ITS' PRODUCTS.

We must therefore, reserve the right to make improvements or changes whenever it becomes practical to do so, without incurring any obligation to make changes or additions to the equipment previously sold.



FIGURE 1





**FIGURE 1  
WINDROW MERGER  
PICK UP**

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	WM178	RH Side Panel	33.	WM33	LH Rubber Bumper Stop Mount
2.	WM2	Rubber Bumper Stop Mount	34.	WM223	LH Side Panel
3.	WM179	RH Roller Adjustment Bracket	35.	WM194A	Pickup Belt 1/2 Section (Ser. #000151 & Above)
4.	WM5	Lifting Rod	35.	WM194	Pickup Belt 1/2 Section (Ser. #990150 & Prior)
5.	WM6	Lift Linkage Spacer			
6.	T23	3/4-16 Nylock Nut Fine Thread	36.	WM195	1/2 Belt, V
7.	WM7	Shocks	37.	WM35A	Rod, Finger 3/8" ODx17-3/8"
8.	WM9	3/8-24 Nut	38.	WM38A	Splice Wire (Ser. #000151 & Above .141 Dia. x 18")
9.	WM10	Shock Pin	38.	WM38	Splice Wire (Ser. #990150 & Prior .09 Dia. x 18")
10.	WM180	Side Panel Slot Plate			
11.	WM11	Pulley, Flat 1" Wide	39.	WM31	Belt, V
12.	WM12	Pulley, V	40.	WM34	Front Roller
13.	WM13	Pulley, Flat 2" Wide	41.	WM122	Bottom Roller Scraper
14.	WM181	Back Roller Drive Shaft	42.	WM39	Tooth #1
15.	WM15	Wood Bearing (Requires 4)	43.	WM40	Tooth #2
16.	WM182	Bolt	44.	WM41	Tooth #3
17.	WM183	Spacer	45.	WM42	Tooth #4
18.	WM184	Z-Channel	48.	WM196	Pickup Belt Section (Ser. #000151 & Above)
19.	G12	5/16x1" Woodruff Key	48.	WM36	Pickup Belt Section (Ser. #990150 & Prior)
20.	WM185	PVC Spacer	*	WM197	Complete Pickup Belt (2-WM196 plus 1-WM194A)
21.	DWM39	Hydraulic Motor Mount	49.	WM218	Pivot Washer
22.	WM186	Bearing Bracket LH	50.	WM219	Poly Slides
*	WM187	Bearing Bracket RH	51.	WM221	Pivot Spacer
23.	F145	Flange			
24.	WM29	Bearing			
25.	F143	Flange (Greasable)			
26.	WM27	Lock Collar, 1-1/4"ID (W/Set Screw)			
27.	DWM40	Shield			
28.	DWM79	Coupler			
30.	WM191	Pivot Bushing Bracket			
31.	T79	Bushing			
32.	WM192	LH Roller Adjustment Bracket			

NOTE: \* (Means Not Shown)

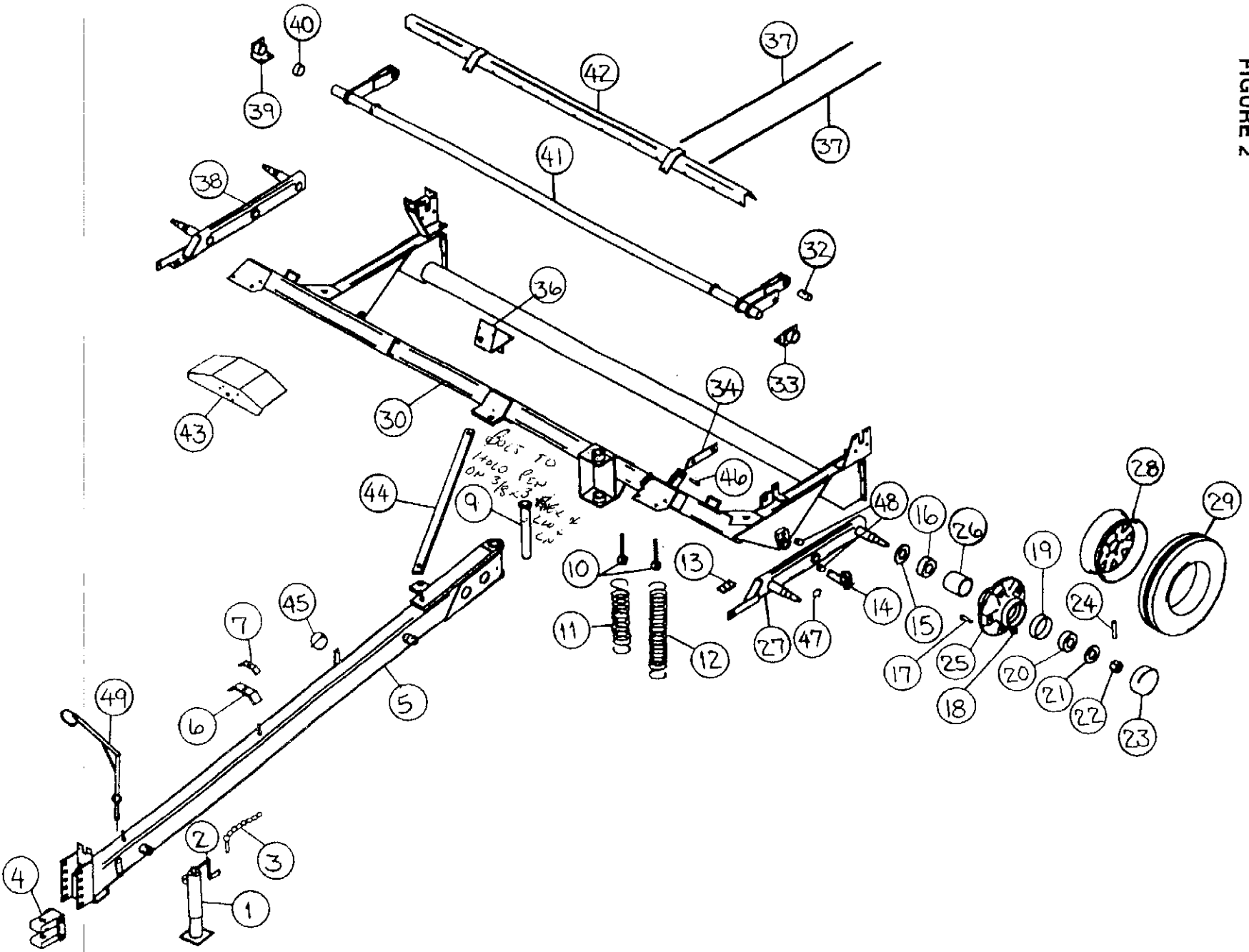
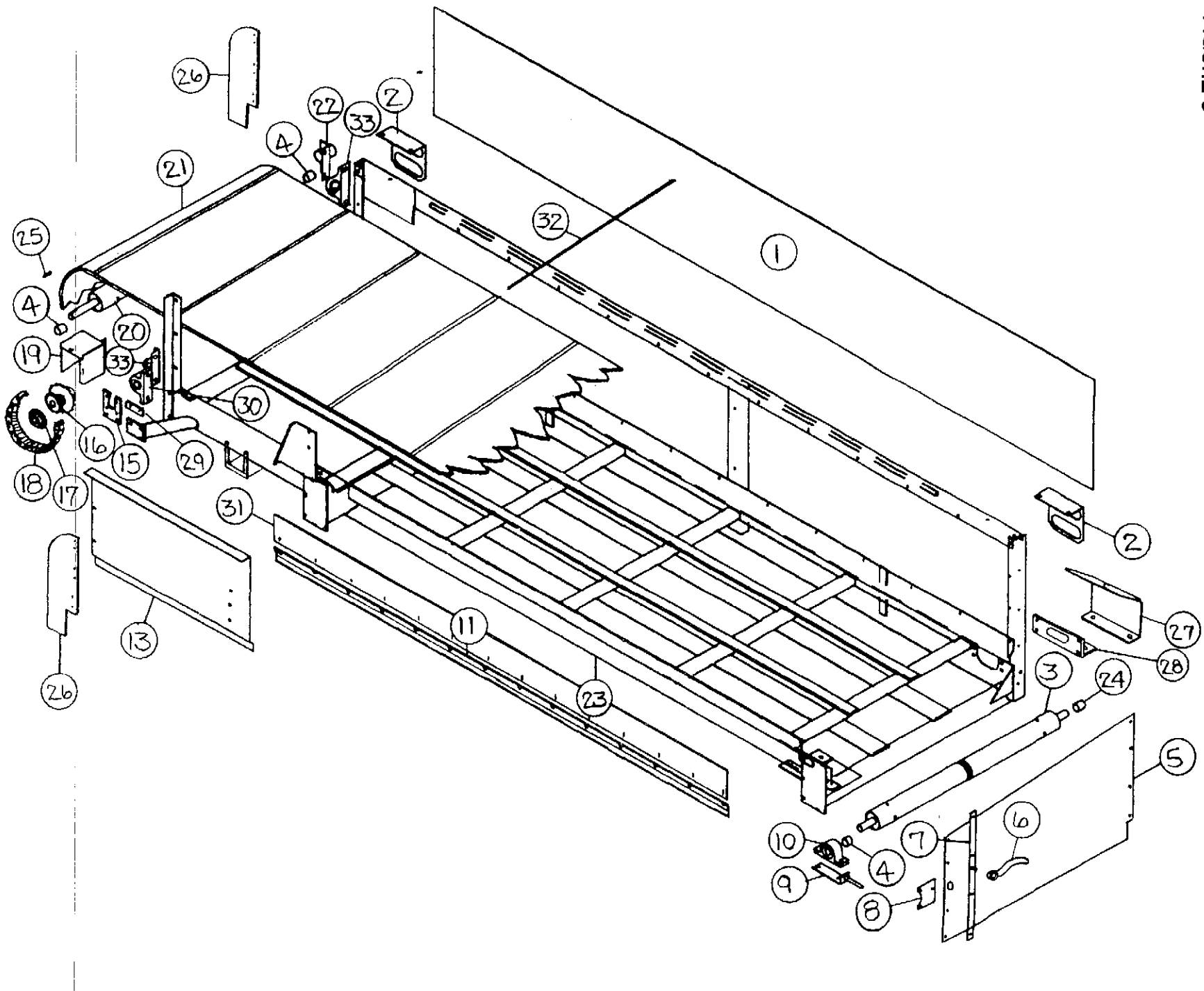


FIGURE 2

**FIGURE 2  
CHASSIS ASSEMBLY**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTIONS</b>
1.	BFR223	Jack
2.	B17B	Jack Handle
3.	BFR4	Jack Pin and Chain
4.	WM43	Hitch, Adjustable
5.	WM44	Pole
6.	HE42	Large Hose Holder
7.	23N67	Small Hose Holder
8.	WM123	Hydraulic Bracket
9.	WM46	Pole Pin
10.	WM47	Spring Holder
11.	WM48	Spring, Pickup
12.	WM49	Spring, Tandem
13.	WM50	Bumper
14.	WM198	Axle Pivot Pin
15.	CAT5	Seal
16.	CAT6	Inner Bearing
17.	CAT128A	Hub Stud
18.	CAT14	Hub Nut
19.	CAT9	Outer Race
20.	CAT10	Outer Bearing
21.	BFR63	Washer
22.	T35	Spindle Nut
23.	CAT13	Hub Cap
24.	T37	Cotter Pin
25.	CAT8	Hub W/Cups
26.	CAT7	Inner Race
27.	WM52	LH Tandem
28.	CAT195	Wheel 13 x 4.5
29.	CAT198	Tire ST175 x 80D13
30.	WM53	Main Frame
32.	WM55	Lift Arm Pivot
33.	WM56	LH Lifter Bearing Bracket
34.	WM57	Safety Bar
36.	WM59	Valve Mount
37.	WM60	Wind Guard Rods
38.	WM61	RH Tandem
39.	WM62	RH Lifter Bearing Bracket
40.	WM63	Lift Linkage Spacer
41.	WM64	Lifting Linkage
42.	WM65	Wind Guard
43.	WM19	Valve Shield
44.	WM129	Transport Lock
45.	F56	Linch Pin
46.	WM25	Clevis Pin 5/8" x 2"
47.	12V82	Snap Ring
48.	X75	Axle Bushing
49.	16SV332	Hose Holder

FIGURE 3

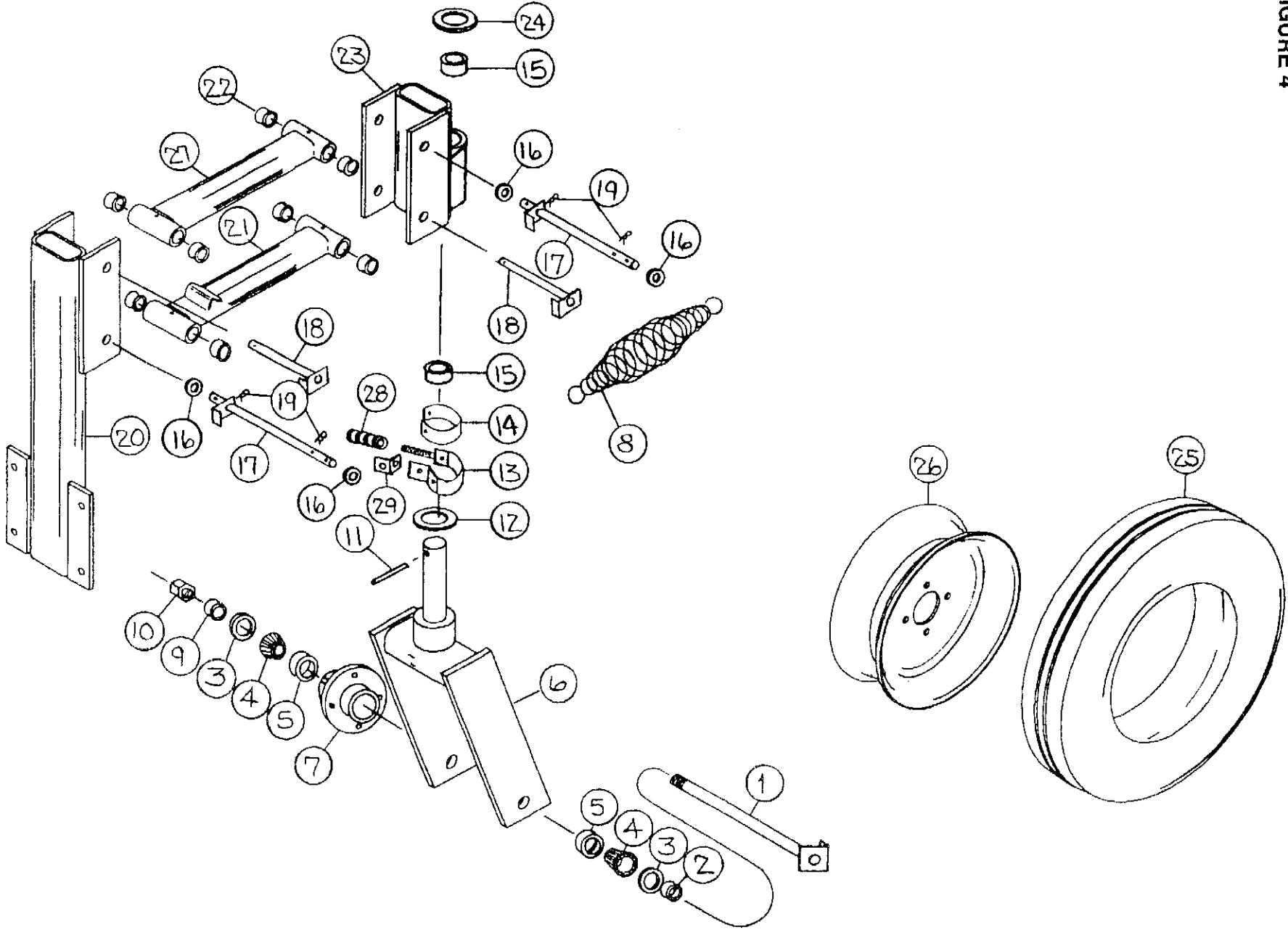


**FIGURE 3  
CONVEYOR ASSEMBLY**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1.	WMM199	Back Poly
2.	WMM67	Light Bracket
3.	WMM68	Left Conveyor Roller
4.	WMM69	Short Roller Spacer
5.	WMM200	Conveyor Left End Poly
6.	S192	Handle Nut
7.	WMM71	Left Poly Bar Strip
8.	WMM72	Front Poly Holder
9.	WMM73	Conveyor Bearing Tightener
10.	17G7	1-1/4" Bearing
11.	WMM74	Front Conveyor Skirt
13.	WMM76	Conveyor Front Bottom Rail
15.	WMM78	Hydraulic Motor Mount
16.	WMM98	Sprocket 17T - 11T
17.	D84	Sprocket 11T
18.	D83	#60 Chain 11 Pitch
*	D39	Connector Link #60
19.	WMM82	Conveyor Shield
20.	WMM83	Drive Conveyor Roller
21.	WMM84	Conveyor Belt
22.	WMM85	Stub Shaft Shield
23.	WMM86	Conveyor Frame
24.	WMM87	Long Roller Spacer
25.	WMM121	Key 5/16" Square x 1"
26.	WMM101	Discharge Shield
27.	WMM126	Conveyor Bearing Shield
28.	WMM128	LH Rear Tightener Bracket
29.	WMM134	Hydraulic Motor Mount Spacer
30.	WMM166	1-1/4" Bearing
31.	WMM203	Rubber
32.	WMM220	Cross Conveyor Lacing Pin
33.	DWMM36	Anti-Wrap

**NOTE: \*** (Means Not Shown)

FIGURE 4



**FIGURE 4  
CARRY WHEEL ASSEMBLY**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1.	BFR279	Axle Shaft
2.	BFR278A	Spacer
3.	BFR273	Seal
4.	BFR274	Bearing
5.	BFR275	Race
6.	BFR270	Complete Fork
7.	BFR276	Hub
8.	WM209	Spring
9.	BFR272A	Spacer
10.	BFR271	1" Nylon Lock Nut
11.	F26	Roll Pin
12.	BFR269	Bronze Washer
13.	WM207	Brake
14.	WM208	Brake Pad
15.	23N17	Bronze Bushing
16.	WM112	Washer
17.	WM206	Spring Mount Shaft
18.	WM205	Clevis Pin
19.	T72	Cotter Pin
20.	WM90	Upright Mount Tubing
21.	WM91	Link Tubing
22.	23N17	Bronze Bushing
23.	WM92	Wheel Pivot Mount
24.	BFR179	Washer
25.	BFR277	Tire
26.	BFR280	Wheel
*	BFR276	Hub Complete
27.	WM117	Link Tubing Top
28.	WM210	Brake Spring
29.	WM211	Brake Angle

**NOTE: \*** (Means Not Shown)

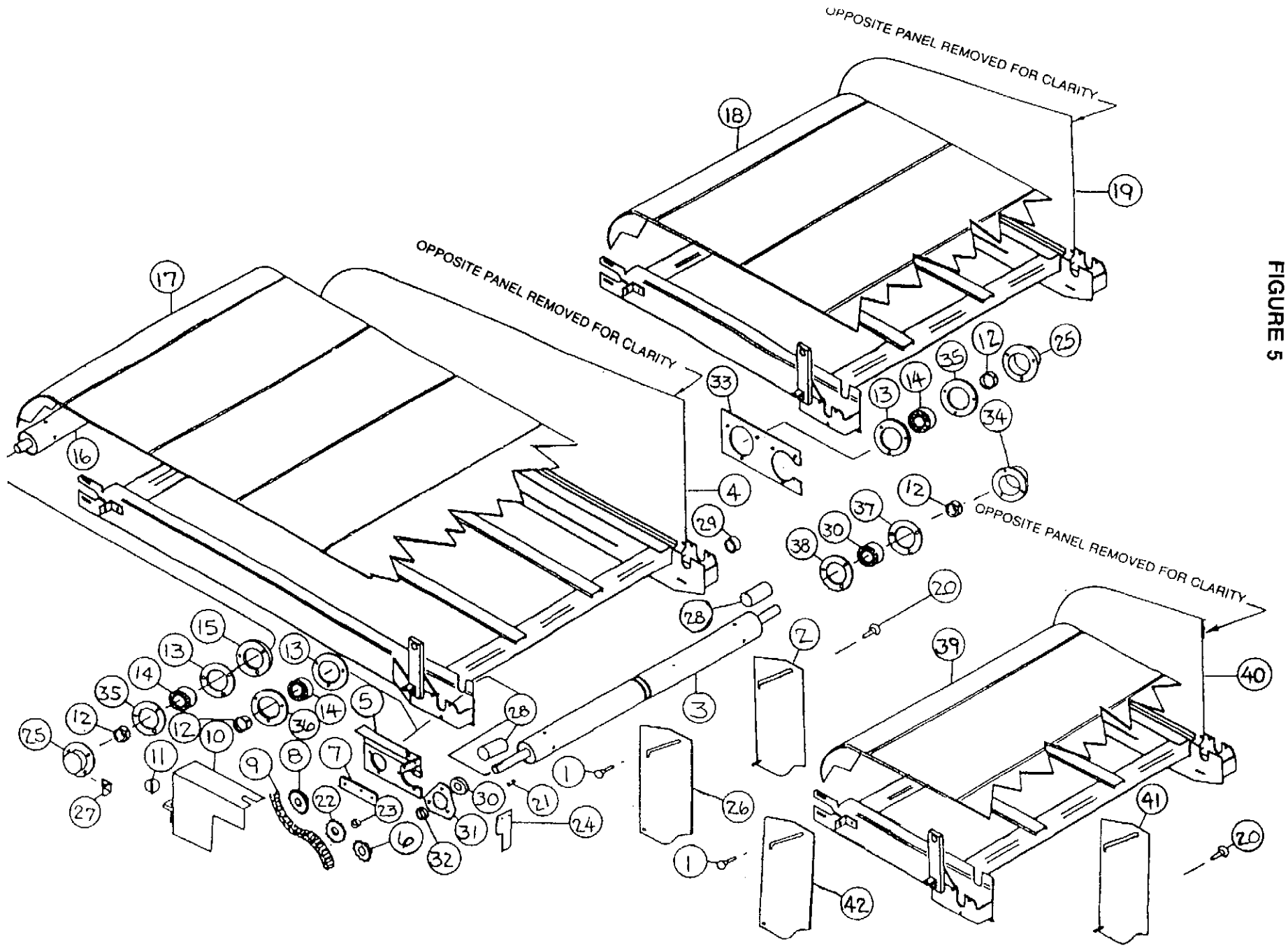


FIGURE 5



**FIGURE 5**  
**OPTIONAL EXTENSION 2'-4' AND 6'**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1.	WM93	Slot Pin Pivot Front
2.	WM94	Extension Filler Back
3.	WM83	Drive Conveyor Roller
4.	WM96	Extension Two Frame (6 Ft.)
5.	WM97	Extension Front Connection
6.	WM98	Sprocket 17T-11T (Drive Roller Sprocket on Base Unit)
7.	WM99	Tightener Bar
8.	WM100	Sprocket 17T (#50)
9.	WM113	#50 Chain 35 Pitch
10.	WM102	Extension Shield
11.	F56	Linch Pin
12.	F16	Lock Collar
13.	F14	Flange 1-1/4"
14.	F115	Bearing
15.	23N174	Flange Spacer
16.	WM103	Extension Conveyor Roller
17.	WM104	Extension Belt (6' Extension)
18.	WM105	Extension Belt (4' Extension)
19.	WM106	Extension One Frame (4 Ft.)
20.	WM107	Slot Pin Pivot Back
21.	WM121	Key 5/16" Square x 1"
22.	WM117	Idler Sprocket 12T
23.	WM125	Sprocket Bearing
24.	WM132	Extension Bolt on Shield
25.	F95	Beater Bearing Shield
26.	WM133	Extension Filler Front
27.	WM135	Tightener Angle
28.	WM136	Extension PVC Shield
29.	WM137	Extension Long Spacer
30.	WM29	Bearing 1-1/4"
31.	WM28	Triangle Flanges - 3 Hole
32.	WM27	Lock Collar 1-1/4" ID (W/Set Screw)
33.	WM213	Large Extension Bearing Mount
34.	WM212	Bearing Shield
35.	F114	Flange
36.	F114A	Flange
37.	F143	Flange - 45 Degree Zerk
38.	F145	Flange - Heavy Duty
39.	WM214	Extension Belt (2 Ft. Extension)
40.	WM215	Extension Three Frame (2 Ft.)
41.	WM216	Extension Filler Back (2 Ft.)
42.	WM217	Extension Filler Front (2 Ft.)

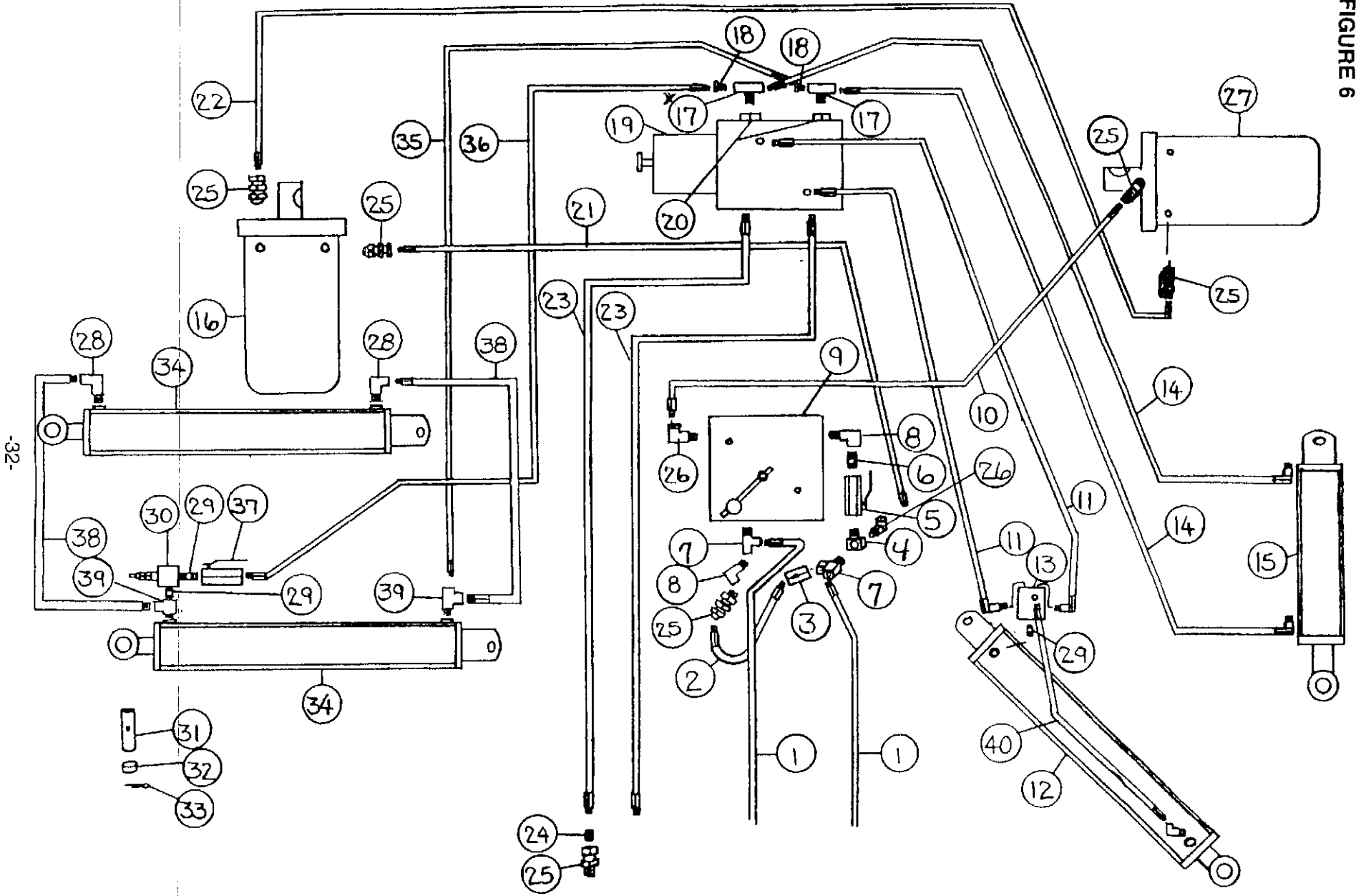
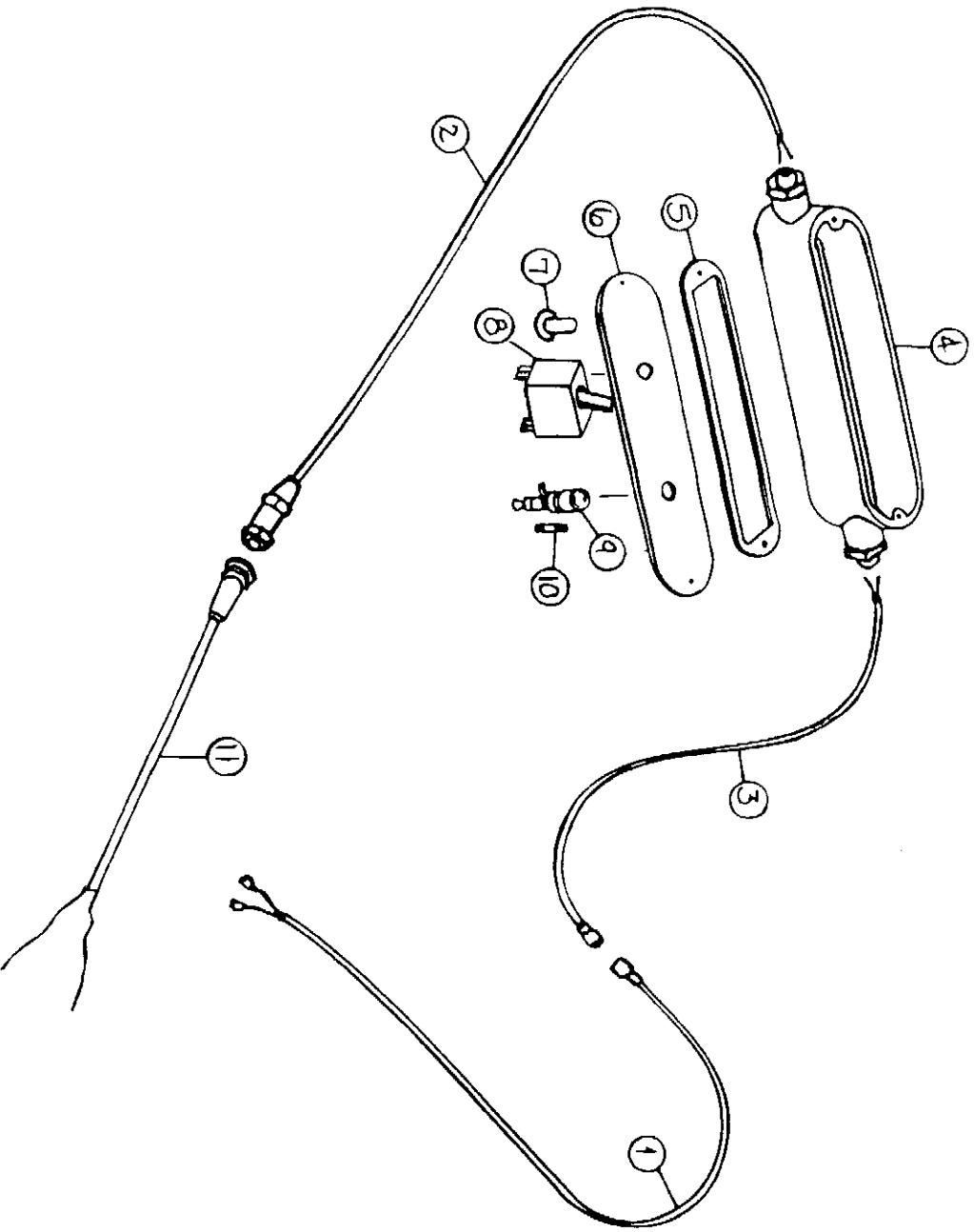


FIGURE 6

**FIGURE 6  
HYDRAULICS**

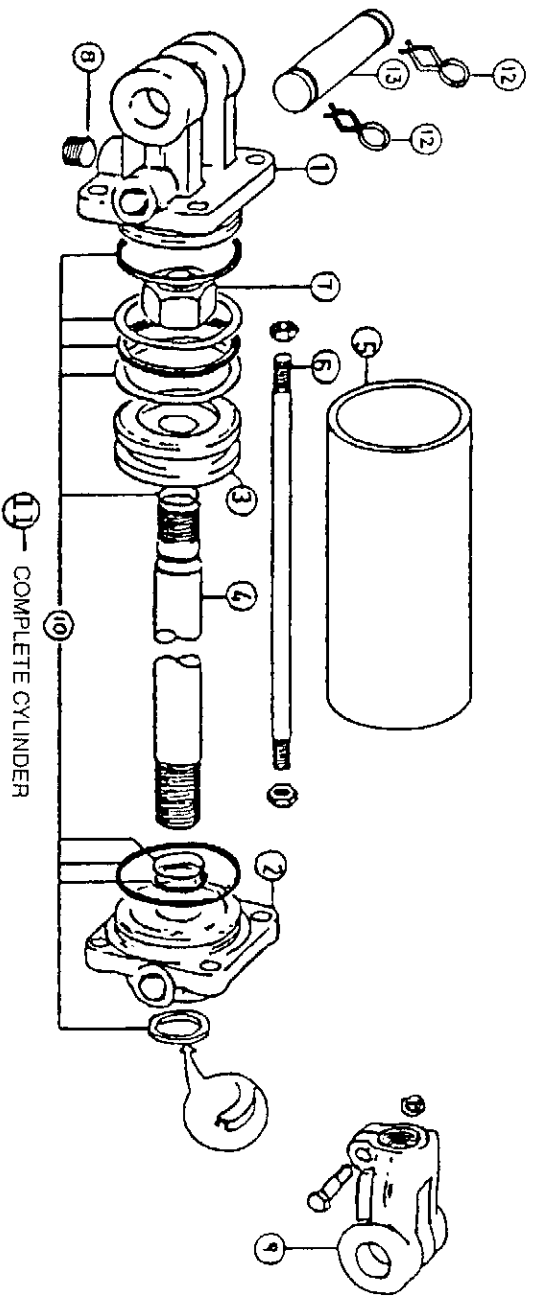
<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1.	WM171	Hose 1/2" x 193"
2.	WM170	Hose 1/2" x 10-1/2"
3.	DF18	Check Valve
4.	WM139	Service Tee 1/2"
5.	WM140	1/2" Ball Valve
6.	WM141	1/2" Nipple
7.	16SV352	1/2" Street Tee
8.	HE58	1/2" Street Elbow
9.	DF15	Flow Control
10.	WM172	Hose 1/2" x 106"
11.	WM143	Hose 1/4" x 24"
12.	12V116	Cylinder
13.	WM176	Pole Lock Valve
14.	WM145	Hose 1/4" x 62"
15.	BFR69	Cylinder
16.	DF1	Hydraulic Motor
17.	WM146	3/8" Street Tee
18.	WM147	3/8" Pipe Plug
19.	16SV247	Electric Valve
20.	WM148	Adapter 3/4-16 O-Ring
21.	WM174	Hose 1/2" x 203"
22.	WM173	Hose 1/2" x 294"
23.	WM151	Hose 1/4" x 200"
24.	WM81	Orifice .062
25.	LW174	Adapter Union
26.	WM175	90 Degree Union Adapter
27.	WM177	Hydraulic Motor
29.	BFR188	Nipple 3/8"
40.	BFR315	Hose 1/4"x20"
<b>OPTIONAL EXTENSION HYDRAULICS:</b>		
28.	23N234	Street Elbow
29.	BFR188	Nipple 3/8"
30.	16SV339	Sequence Valve
31.	BFR517	Cylinder Pin
32.	X28	Spacer
33.	23N108	Cotter Pin 3/16" x 2"
34.	12V116	Cylinder
35.	WM152	Hose 1/4" x 153"
36.	WM153	Hose 1/4" x 169"
37.	16SV338	1/4" Ball Valve
38.	WM204	Hose 1/4"x80"
39.	23N116	Tee



**FIGURE 7**  
**ELECTRIC CONTROL BOX**

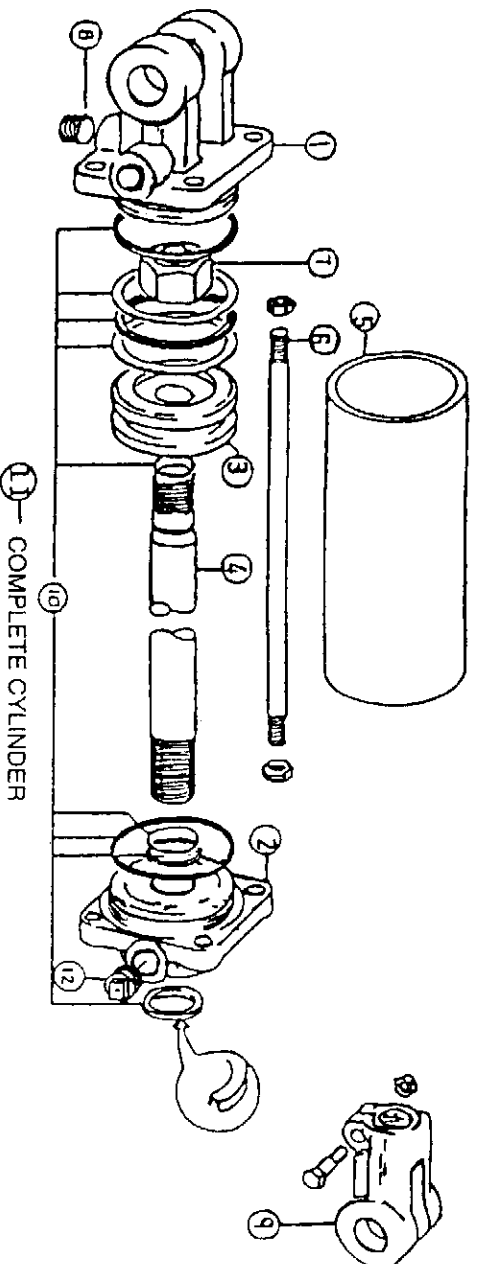
<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>
1.	WM1108	Merger Power Supply Cord W/Ends
2.	16SV271	Control Box Power Supply W/Plug In Slots
3.	16SV270	Tractor Power Supply W/Pins
4.	16SV316	Control Box
5.	16SV317	Control Box Gasket
6.	16SV318	Control Box Cover
7.	16SV235	Switch Boot
8.	WM1109	Pole / Pickup Switch
9.	16SV231	Fuse Folder
10.	16SV232	Fuse
11.	16SV269	Tractor Control Cord
*	WM1110	Control Box Complete

**NOTE: \*** (Means Not Shown)



**FIGURE 8**  
**HYDRAULIC CYLINDER 16"**

ITEM	PART NO.	DESCRIPTION
1.	23N142	Clevis Cap
2.	23N143	Rod Cap
3.	23N144	Piston
4.	23N145	Rod
5.	23N146	Cylinder Tube
6.	23N147	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150	Rod Clevis
10.	23N151	Seal Kit
11.	12V116	Complete Cylinder
12.	T144	Clip Pin
13.	T143	Hydraulic Cylinder Pin



**FIGURE 9**  
**HYDRAULIC CYLINDER 8"**

ITEM	PART NO.	DESCRIPTION
1.	23N142	Clevis Cap
2.	23N143	Rod Cap
3.	23N144	Piston
4.	T134	Rod
5.	BFR68	Cylinder Tube
6.	T186	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150	Rod Clevis
10.	23N151	Seal Kit
11.	BFR69	Complete Cylinder
12.	BFR70	Clip Pin

## H&S WINDROW MERGER

Your new H&S Windrow Merger has been manufactured of the finest quality materials and components. The performance you get from your machine is largely dependent upon how well you read and understand this manual and apply this knowledge. There is a right and a wrong way to do everything. Please do not assume that you know how to operate and maintain your Windrow Merger before reading this manual carefully. Keep this manual available for ready reference.

### WINDROW MERGER SPECIFICATIONS

Overall Width Base Unit	14'1"
Overall Width w/4' Extension (Folded Up)	14'3"
Overall Width w/4' Extension (Folded Down)	17'10"
Overall Length - Pole Swung In	21'9"
Overall Length - Pole Swung Out	22'10"
Overall Height - Extension Down	50-1/2"
Overall Height - Extension Up	66"
Weight	3090 lbs.
Tandem Tire Size	ST175/80D13 Load Range B
Pickup Width	9' in 18" Sections
Cross Conveyor Width	42"
Hydraulic Capacity Needed	16-18 Gallons Per Minute 2000 Lbs. Pressure
Merging Capability - Base Unit	9' to 12'
w/2' Conveyor Extension	12' to 14'
w/4' Conveyor Extension	14' to 16'
w/6' Conveyor Extension	18'
Hydraulic Tongue Adjustment	62"

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Warranty: 1st Year-Parts & Limited Labor  
2nd Year - Parts

## H&S MANUFACTURING CO. INC.

2608 S. Hume Ave.

P.O. Box 768 - Telephone (715) 387-3414

FAX (715) 384-5463

MARSHFIELD, WI 54449



H&S WAREHOUSE Rt. #5 and 76

P.O. Box 1260 - Telephone (716) 736-7595

FAX (716) 736-7596

RIPLEY, NY 14775

# H&S MFG. CO.

products approved

for the

## FEMA

# SEAL OF QUALITY

