# H&S

# H D TWIN AUGER Self-Unloading Forage Box





READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS EQUIPMENT.

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

# **OPERATOR'S MANUAL**

and

**PARTS LIST** 

2-6-2009

**Manufactured By** 

H&S MANUFACTURING CO., INC.

P.O. BOX 768 • (715) 387-3414 FAX (715) 384-5463 MARSHFIELD, WISCONSIN 54449

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# (Remove Dealers File Copy At Perforation)

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

# H&S DEALER PRE-DELIVERY CHECK LIST

After the Self-Unloading Box 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.

PTO Shields turn freely.

All Shields and Guards are in place and fastened.

| 0 0000       | All grease fittings have been lubrical See lubrication guide in this manual All mechanisms are operating troubly All Roller Chains are at proper tension Apron Chains are adjusted properly All bolts and fasteners are tight. All decals are in place and legible.   | I.<br>le free.<br>ion.  | o proper level —  |
|--------------|---|---|---|
|              | (Dealer's Name)   |   | Model Number  |
|              |   |   | Serial Number   |
|              | (Signature of Pre-Delivery Insp   | ector)  | (Inspection Date)   |
|              | DEALER DE   | ELIVERY CHECK LIST  |   |
| This pre-del | ch item as you explain it to the custon<br>very check list, when properly filled<br>satisfactorily performed.   |   | the customer that the pre-delive  |
|              | Explain to the customer that the pre<br>Explain to the customer all the safe<br>Explain recommended loads for diff<br>Explain to customer that regular lub<br>machine. Show customer the lubric<br>Give the customer Owner's Manual<br>service instructions.<br>Record Serial Number on Page 22 Have customer sign a completed "V | ty precautions they must<br>erent types of materials.<br>prication is required for p<br>ation section of Owner's<br>and make sure he reads<br>of this Manual. | t exercise when operating this un<br>roper operation and long life of<br>Manual.<br>s and understands all operating a |
| Date Deliver | ed  | -   |   |
| - /-         |   |   |   |
|              |   | S   | Signature of Original Buyer   |

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



# 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.



STAY CLEAR OF BEATER AND/OR CROSS CONVEYOR IF POWER SOURCE OR PTO IS RUNNING

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

KEEP CLOTHING, YOURSELF AND OTHERS WELL CLEAR.

1494





MAINTAIN SAFE CLEARANCE FROM ELECTRIC POWER LINES AND AVOID CONTACT WITH ANY ELECTRICALLY CHARGED CONDUCTOR.

CONTACT WITH ELECTRIC
POWER SOURCES CAN RESULT
IN ELECTRICAL SHOCK OR
ELECTROCUTION.

FAILURE TO HEED THIS WARNING MAY RESULT IN SERIOUS INJURY OR DEATH.

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# **AWARNING**

# **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.
- · DO NOT EXCEED 20 MPH

72203A



# ROTATING DRIVELINE CONTACT CAN CAUSE DEATH KEEP AWAY!

### DO NOT OPERATE WITHOUT-

- ALL DRIVELINE GUARDS, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVELINES SECURELY
   ATTACHED AT BOTH ENDS
- DRIVELINE GUARDS THAT TURN FREELY ON DRIVELINE



# **A** DANGER

NEVER ENTER
FORAGE BOX
UNLESS THE
FOLLOWING SAFETY
PRECAUTIONS ARE
FOLLOWED.

A DANGER

SEPTIMENT OF THE PROPERTY OF THE PRO

**CONTACT CAN CAUSE DEATH** 



TO PREVENT SERIOUS INJURY OR DEATH NEVER OPERATE THIS UNIT UNLESS EMERGENCY STOP FUNCTIONS PROPERLY<sub>5896C</sub>





# **▲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.

  1



# WARNING DO NOT REMOVE SHIELDS MOVING PARTS INSIDE



# **A WARNING**

DO NOT INSTALL
BOLSTER PLATES ONTO
BOX STRINGER
WITHOUT BLOCKING
BOX IF BOX IS
RAISED UP





# **A WARNING**

DO NOT OPERATE
THIS EQUIPMENT
IF THIS DECAL IS
EXPOSED.
REPLACE SAFETY
SHIELDS.

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# **H&S H D TWIN AUGER FORAGE BOX**



### 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 UNLOADING MECHANISM BEFORE STARTING IT.

If the machine becomes clogged, <u>disengage the PTO or tractor hydraulics</u>. 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 and PTO or tractor hydraulics hooked up.

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

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

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

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

Before starting tractor, be sure PTO shields turn freely and PTO is securely locked to tractor.

**DO NOT** clean, adjust, or lubricate the machine when any part is in operation.

Check frequently to be assured that the emergency stop mechanism is in proper operating condition.

Keep hands, feet, and clothing away from beaters when they are revolving.

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 PTO or tractor hydraulics.

**DO NOT** step over power take off shaft. Stay clear of PTO at all times.

**NEVER** start forage box until all guards and safety shields are secured in place.

**NEVER** put hand in cross conveyor outlet openings while tractor is running.

**CAUTION** – Beware of low electrical wires.

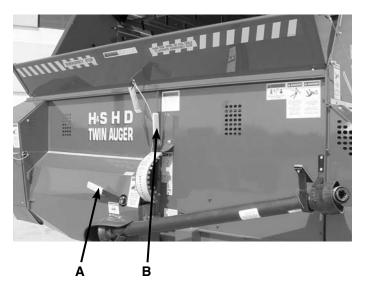
**NEVER** hook up 1000 RPM tractor to the forage box.

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



# TO PREVENT SERIOUS INJURY OR DEATH NEVER OPERATE THIS UNIT UNLESS EMERGENCY STOP FUNCTIONS PROPERLY



- Pushing the emergency stop bar rearward or pulling the trip cables will activate the stop to disengage position.
- Activating emergency stop only stops box functions. The PTO shaft will continue to rotate.
- 3. Keep excessive slack out of trip cables.
- 4. Trip emergency stop occasionally, and when starting the unit after periods of storage to insure proper function.
- 5. To reset, move lever (A) clockwise to engage position.

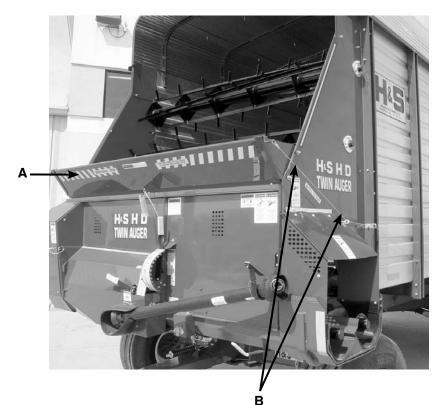
### **UNLOADING**

- 1. Park forage box on level ground whenever possible during unloading. Lock tractor parking brake.
- 2. Connect PTO to tractor, locking securely in place. USE 540 PTO ONLY.
- 3. Engage PTO.
- 4. To engage cross conveyor INTERMITTENTLY, rotate clutch lever (A) clockwise and hold with hand pressure. If hand pressure is removed, the cross conveyor will stop.
- 5. To engage the cross conveyor CONTINUOUSLY, rotate clutch lever (A) clockwise until it locks in the engaged position. Cross conveyor speed is controlled by tractor RPM only.
- 6. Quickly engaging/disengaging beaters (lever B) will allow beaters to clear material a little at a time to avoid exceeding blower capacity.
- 7. When beaters are clear of material, move control lever (B) to apron speed positions. Variable speed drive offers you a number of unloading speeds to choose from. With experience and depending on the type of forage, you will be able to select a speed which will match your blower capacity. Unloading speed may also be varied by increasing or decreasing engine speed of tractor.

# **UNLOADING** (Continued)

- 8. If it is necessary to trip the stop mechanism and disengage forage wagon drive before the wagon is empty, restart unloading by engaging clutch lever (A). (Shown on Page 10)
- 9. Clean out position is for cleaning out forage box at the end of load.
- 10. When forage box is empty, return control lever (B) to beater disengage position. (Shown on Page 10)
- 11. Move control lever (A) to disengage position. (Shown on Page 10)
- 12. Disconnect PTO and place in convenient holder for field and road use.

### **EMERGENCY STOP**



In case of an emergency, pushing emergency stop panel or pulling the safety cable will stop cross conveyor, beaters, and main aprons. PTO will continue to rotate. Trip emergency stop occasionally to insure proper function.

- A. Emergency Stop Panel
- B. Emergency Stop Cable



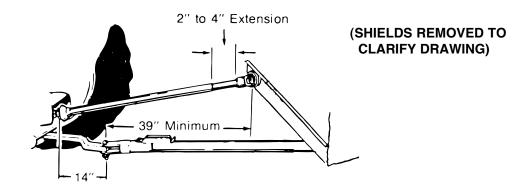
WARNING: Some photographs used in the following pages show guards or shields removed for clarification. NEVER operate machine until these guards or shields are in proper operating position.

# **BEFORE OPERATION**

Check entire unit carefully before first operation. Tighten bolts, set screws, and chains which might have come loose in handling. Lubricate as explained in the lubrication guide. Run entire feeding mechanism and unloading mechanism for several minutes. This will serve as a break-in and as a check that all parts are assembled and lubricated properly. Successful operation will be achieved by periodic adjustments and experience of the operator. Make sure to read and understand the main feeder apron adjustments.

# **Hitch To PTO Length – Tractor Drive Only**

Maintain correct distance between tractor drawbar hitch and tractor PTO and tractor drawbar hitch and the universal joint at front of unit. This is necessary to prevent overextending the universal joint shaft.



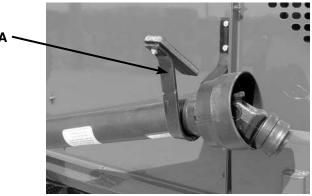
### IMPORTANT! DO NOT operate unless 2" minimum extension is maintained.

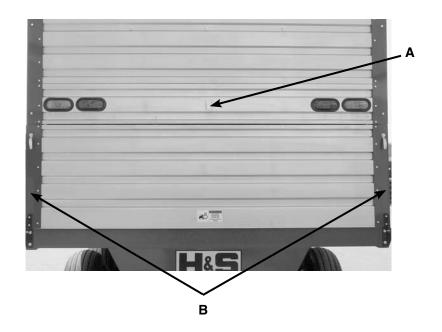
The tractor drawbar should be adjusted in relation to the tractor PTO shaft as follows:

- 1. Hitch point of drawbar 14 inches behind tractor PTO shaft.
- 2. Hitch point of drawbar at least 8 inches, but not more than 14 inches below PTO shaft.
- 3. Hitch point of drawbar at least 13 inches, but not more than 22 inches above ground level.
- 4. When unloading, keep hitch point of drawbar PTO shaft in a straight line to forage box having PTO at an angle will result in a pounding noise and damage to U joints.



The Power Take Off Shaft from tractor to box should not be connected for road travel or field operation. Damage may result to the PTO Shaft. A convenient hanger is provided to hold PTO Shaft during the time it is not being used to unload. (See item A)





Mounting Socket for SMV Emblem (A)

Red Reflective Tape (B)

WHEN TRANSPORTING ON THE HIGHWAY OR ROADS, PLACE SMV SIGN IN SOCKET PROVIDED AND REGULARLY CLEAN THE REFLECTIVE TAPE AT THE REAR OF THE FORAGE BOX.

NOTE: Obey all state and local laws, concerning towed equipment, on public roads.

For light information (See Page 23)

### MAIN FEEDER APRON ADJUSTMENT

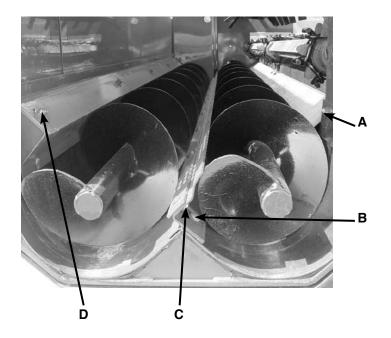
Main feeder apron adjustment bolts are located behind the convenient access door located in the bottom portion of rear tailgate. Remove handle nuts (A) to open access door and swing door downward.

All apron chains must be taken up evenly before you use the forage box. Check again after the first few loads. The Main Feeder Aprons should be at proper tension at all times. Tighten the full threaded bolts (B) to adjust aprons. Aprons are properly adjusted when two Cross Slats, or about three feet of chain lift off the Chain Return Slides from the rear of the box. Maintain this tension when operating the box.





# **CROSS CONVEYOR**



### **ADJUSTMENT**

Proper tension should be maintained on the auger wipers and hold downs when operating forage box. To adjust wipers and hold downs, start with rear auger first. Loosen bolts (A) securing rear hold down. Adjust hold down tight against auger flighting. Retighten bolts. Loosen bolts (B) holding front wiper on rear auger, and slide wiper against flighting so end of auger can only be raised slightly. Retighten bolts. Loosen (C) and slide hold down tight against auger flighting. Retighten bolts. To adjust front auger wiper, loosen bolts (D) and slide wiper against flighting of auger so end of auger can only be raised slightly. Retighten bolts. Check adjustment of wipers and hold downs periodically.

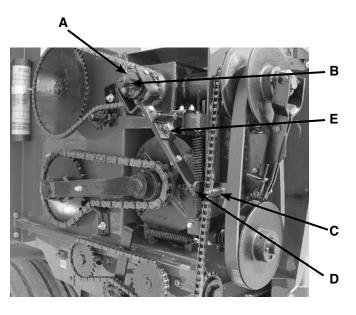


Shown here is the plastic guard which protects the operator from accidentally being exposed to the bottom beater at the discharge opening during operation of forage box. Keep this guard in proper position at all times when operating forage box.



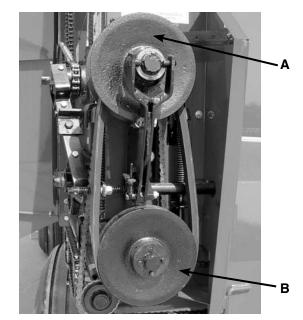
# BEATER ENGAGE AND APRON SPEED CONTROL LEVER

This single lever controls both beater engage/ disengage, and the speed of the main feeder aprons. This control lever is spring loaded to allow the operator to select desired speed of unloading prior to engaging drive clutch. **CAUTION:** DO NOT ENGAGE BEATERS OR MAIN APRONS WHEN DISCHARGE CHAMBER IS FULL OF MATERIAL OR DAMAGE TO FORAGE BOX WILL RESULT. ALWAYS RETURN LEVER TO NEUTRAL POSITION WITH PTO RUNNING AND DRIVE CLUTCH ENGAGED. CROSS CONVEYOR IS CONTROLLED BY DRIVE CLUTCH LEVER.



### **BEATER CLUTCH ADJUSTMENT**

Check beater clutch periodically to insure beaters are being completely engaged or disengaged. Beater engage/disengage clutch is properly adjusted when there is 1/8 inch of clearance between clutch jaw (A) and engaging pin (B), when control lever is in the disengage position. Basic adjustment can be made by positioning adjusting nut (C) 2-7/8" from end of control rod. Place control arm (D) tight against nut. Adjust mounting bracket (E) in slotted holes on unit until 1/8" clearance is reached. Fine adjustment is made by adjusting nut (C) on control rod.



### VARIABLE SPEED DRIVE BELT

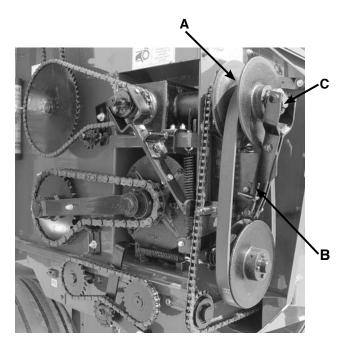
After extended use of forage box, it may become necessary to adjust or replace variable speed drive belt.

### REPLACEMENT

If it becomes necessary to replace the variable speed drive belt, follow the steps listed below to remove worn belt:

- 1. Place control lever in beater disengage position.
- 2. Open upper sheaves (A) so belt rests on drive pins.
- 3. Remove belt from lower sheaves (B) first and then upper sheaves.

Reverse the above steps when installing new belt.

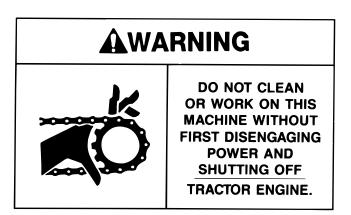


### VARIABLE SPEED BELT ADJUSTMENT

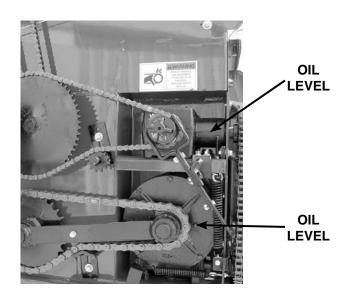
### **ADJUSTMENT**

You should rarely have to adjust the variable speed drive belt. If, however, it becomes necessary to adjust the belt, follow the steps listed below:

- 1. Remove belt as previously instructed.
- 2. Move control lever to the highest apron speed position.
- 3. Check upper sheaves (A), if base of sheaves are not tight together, it is necessary to adjust.
- 4. Remove bolt from control rod (B).
- 5. Slide sheaves tight together, being sure control yoke (C) is tight against thrust bearing and sheaves.
- 6. Adjust control rod (B) so hole in control yoke and rod align, then one additional turn.
- 7. Replace bolt. Allow sufficient play when tightening, so control rod pivots.
- 8. Place control lever in beater disengage position and replace belt.



# **LUBRICATION GUIDE**



The operator should become familiar with all lubrication points and establish a systematic routine to insure complete and quick lubrication of the machine.

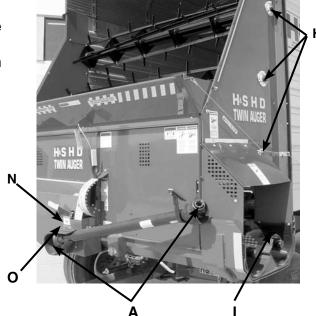
GEAR BOXES – Before using your new machine, check the oil in the main apron drive and beater drive gear box. Keep the main apron gear box filled to the oil level plug in cover of gear box. Beater drive gear box should be filled to the center of the shafts. Use 80W-90 gear lube.

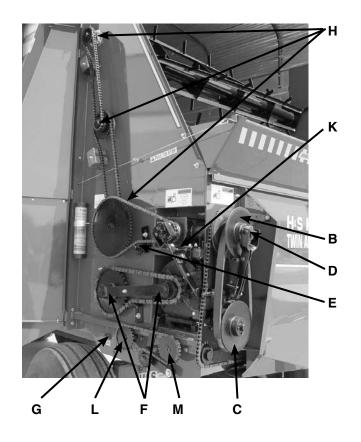
DRIVE CHAINS – Lubricate the drive chains with a light machine oil. Keep chains aligned with sprockets. This will lengthen the life of the sprockets and chain. Lubricate chains often.

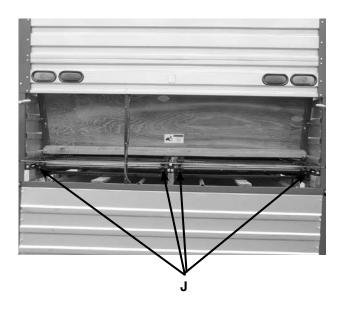
# LUBRICATION GUIDE (Continued)

There are 27 grease fittings on your new H&S H D Twin Auger Forage Box. Grease daily during normal use and before and after storage. Use a good grade of high quality grease.

- A. (2) one at each end of PTO at U-joint
- B. One on variable drive outer upper sheave
- C. One on variable drive inner lower sheave
- D. One on beater drive clutch
- E. One on sprocket type chain tightener beater drive chain
- F. (2) one at each end of brace gearbox to main apron drive shaft.
- G. (2) remote fittings for right hand and center main apron drive shaft bushings..
- H. (6) beater bearings one at each end of each beater (sealed bearings DO NOT over grease)
- I. One on left hand main apron drive shaft bushing
- J. (4) one on each main apron rear idler sprocket
- K. One on beater engage bronze yoke
- L. One on rear auger drive end (sealed bearing)
- M. Two on front auger end (one sealed bearing, one bushing type)
- N. One on Cross Conveyor belt tightener bracket (Under Shield)
- O. One on Cross Conveyor belt clutch control handle (Under Shield)







# PTO ASSEMBLY

# **DANGER**



ROTATING DRIVELINE
CONTACT CAN CAUSE DEATH
KEEP AWAY!

DO NOT OPERATE WITHOUT—

- ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE.
- DRIVELINES SECURELY ATTACHED AT BOTH ENDS.
- DRIVELINE SHIELDS THAT TURN FREELY ON DRIVELINE.

Care must be taken to keep male and female driving elements well lubricated and free sliding. The shield surfaces must be kept dry, as dirt accumulation on them will quickly cause these units to bind and not rotate. If, at any time the shields do not turn freely, they should be checked to determine the cause, and repaired or cleaned. DO NOT STEP OVER PTO SHAFT. STAY CLEAR OF ROTATING PTO AT ALL TIMES.

### STANDARD SLIDE OUT EXTENSION

Extension slides out for easy access to blower and slides in for road and field travel.





**SLID OUT** 

SLID IN

### OPTIONAL EQUIPMENT - HYDRAULIC DRIVE

Hydraulic drive unit easily mounts and dismounts from unit (See Page 42)





Use the following steps when entering forage box when NOT planning to run cross conveyor.

- 1. Shut off tractor.
- 2. Disconnect PTO from tractor and place in PTO hanger.
- \*\* Disengage tractor hydraulics and disconnect quick couplers at tractor.
- 3. Place control lever in beater engage position. This will prevent beaters from turning while climbing over them.
- 4. USE EXTREME CAUTION WHEN CLIMBING OVER BEATERS AS TINES ON BEATERS MAY CAUSE SEVERE INJURY.



If you plan to manually unload forage box utilizing cross conveyor, the following twoman procedure must be followed. NEVER ATTEMPT THIS PROCEDURE ALONE. PERSON OUTSIDE OF FORAGE BOX OPERATING CONTROLS MUST NOT LEAVE CONTROLS.

- 1. Place control lever in beater disengage position.
- 2. Disengage tractor PTO and shut off tractor.
- \*\* Disengage tractor hydraulics and shut off tractor.
- 3. Remove variable speed drive belt. This will prevent main aprons from moving.
- 4. Remove connector link from beater drive roller chain and remove chain from sprockets. CAUTION: BEATERS ARE NOW FREE TO ROTATE.
- 5. Using a short piece of chain with hooks, secure top beater beater to center beater as illustrated below.



Wrap chain around bottom bar of third beater and top bar of second beater. Secure chain together as tight as possible to eliminate beaters from rotating in either direction. Keep excess chain out of cross conveyor chamber. NOTE: Hook chain properly and securely to prevent unhooking during this procedure.

- 6. Using extreme caution, first person may now climb over beaters.
- 7. When first person is clear of beaters, second person may start tractor and engage PTO to operate cross conveyor.
- 8. Before first person attempts to leave forage box, second person must disengage tractor PTO and shut off tractor.
- \*\* Before first person attempts to leave forage box, second person must disengage tractor hydraulics and shut off tractor.
- 9. When forage box is clear of people, remove safety chain from beaters, reinstall drive belt and beater drive chain. Adjust tightener on roller chain.
- \*\* Denotes forage box equipped with optional hydraulic drive unit.

## **DECAL LOCATION**

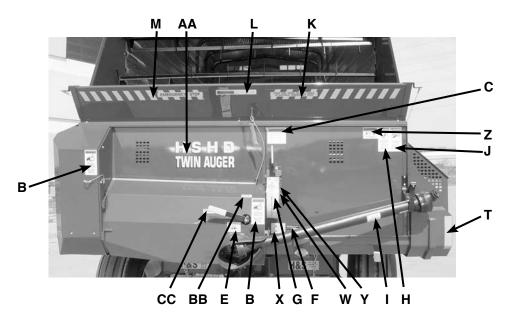
Your H&S H D Twin Auger Self-Unloading Forage Box was manufactured with operator safety in mind. Located on the forage box are various decals to aid in operation, and warn of danger or caution areas. Pay close attention to all the decals on your forage box.

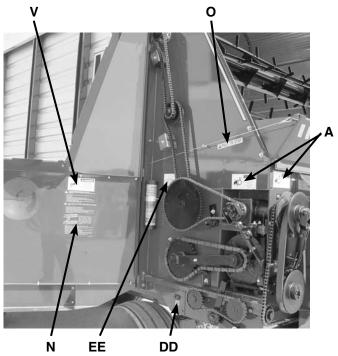


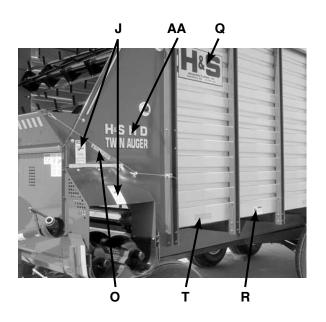
DO NOT REMOVE ANY OF THESE DECALS. IF DECALS ARE LOST, DAMAGED, OR IF FORAGE BOX IS REPAINTED, REPLACE DECALS. REMEMBER: DECALS ARE FOR YOUR PROTECTION AND SAFETY.

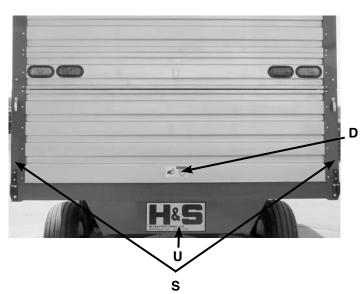
Listed below are the decals on your H D Twin Auger Self-Unloading Forage Box. These decals may be ordered individually by part number or by ordering a complete set.

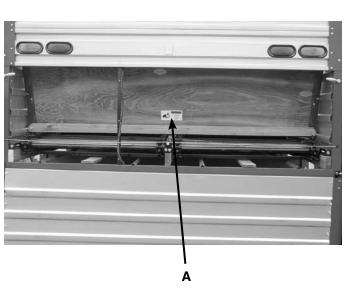
| ITEM            | PART NO.    | DESCRIPTION                         |
|-----------------|-------------|-------------------------------------|
| Α               | 1494A       | (4) Warning - Do Not Operate        |
| AA              |             | (3) H&S H D Twin Auger              |
| В               | 1494K       | (2) Warning - Do Not Remove Shields |
| BB              | 5696E       | Engage                              |
| С               | 72203A      | Warning - Help Avoid Injury         |
| CC              | 5696D       | Disengage                           |
| D               | 1494B       | Warning - Do Not Remove Shields     |
| DD              | 093020      | Grease Gun                          |
| Е               | 5896B       | Danger - Rotating Driveline         |
| EE              | 093366      | Manual Holder                       |
| F               |             | Serial Number                       |
| G               | 1-1-91      | Beater Engage/Disengage             |
| Н               | 1494P       | Danger - Stay Clear - Power Lines   |
| I               | Weasler     | Danger - PTO (H&S Decal 1494L)      |
| J               | 1494H       | (3) Danger - Stay Clear             |
| K               | 104-3185    | Push This Panel                     |
| L               | 5896C       | Warning - Emergency Stop Reset      |
| M               | 103-3185    | Emergency Stop                      |
| N               | 7+4 3185G   | Instruction-Entering Forage Box     |
| Ο               | 120-2177    | (2) Pull To Stop                    |
| Q               |             | (2) H&S Metal Sign (12"x24")        |
| R               | 1494C       | (4) Warning - Moving Parts Under    |
| S               |             | (3) Red Reflector                   |
| T               |             | (5) Amber Reflector                 |
| U               | B17         | H&S Decal (8-1/2"x17")              |
| V               | 1494F       | Danger - Entering Forage Box        |
| W               | 7+4-2191    | Clean Out                           |
| Χ               | H&S         | Patent Numbers                      |
| Υ               |             | FEMA                                |
| Z               | 2495        | Warning - Keep Children Away        |
|                 | 2699 H D TA | Complete Set of Decals              |
| Paint - H & S F | Red         |                                     |
|                 | ZX21        | Gallon                              |
|                 | ZX22        | Quart                               |
|                 | ZX23        | Pint                                |











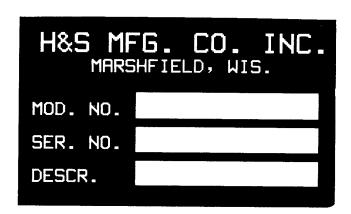
### **INSTRUCTIONS FOR ORDERING PARTS**

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, center 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)



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.

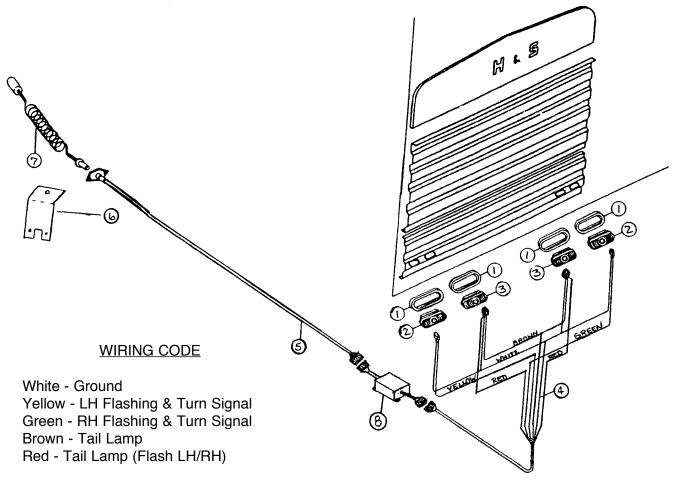


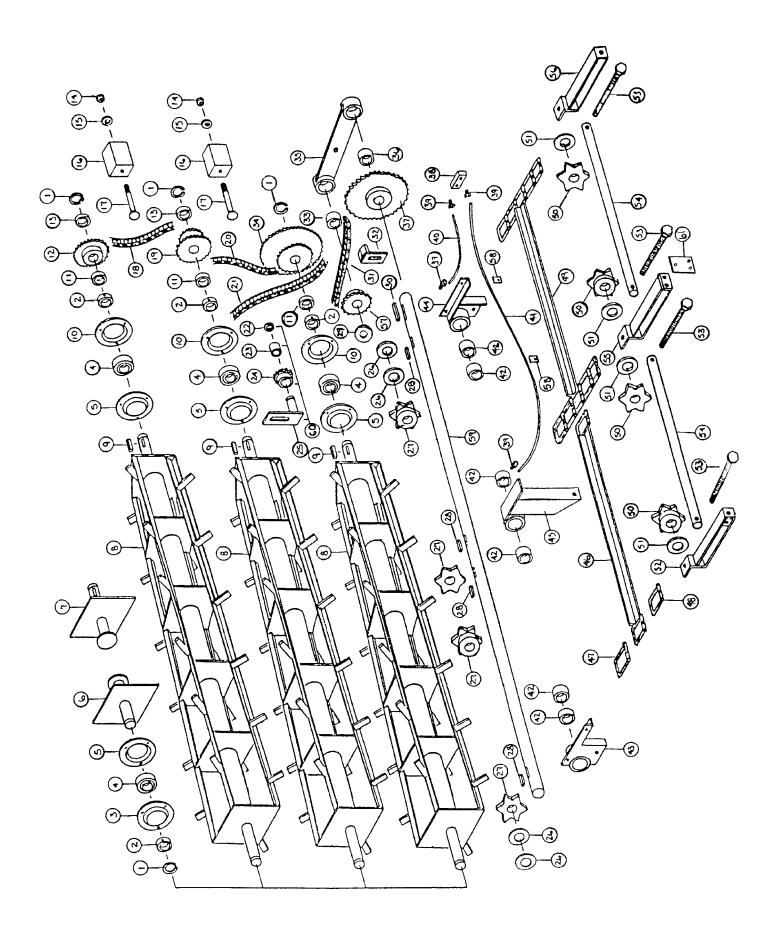
FIGURE A
H D TWIN AUGER FORAGE BOX
LIGHTING ASSEMBLY

| ITEM     | PART NO. | DESCRIPTION                    |
|----------|----------|--------------------------------|
| 1.       | S308     | Rubber Light Mount             |
| 2.       | S309     | Amber Light                    |
| 3.       | S310     | Red Light                      |
| 4.       | S440     | Light Harness (6-WIRE)         |
| 5.       | S443     | 14' Longitudinal Cord (4-WIRE) |
| *        | S443     | 16' Longitudinal Cord (4-WIRE) |
| *        | S442     | 18' Longitudinal Cord (4-WIRE) |
| *        | S439     | 20' Longitudinal Cord (4-WIRE) |
| 6.       | S346     | Mounting Bracket               |
| <u> </u> | S317     | Optional Tractor Cord          |
| 8.       | S441     | Light Module                   |
|          | S445     | 14' Complete Lighting Assembly |
|          |          | Less Optional Tractor Cord     |
| *        | S446     | 16' Complete Lighting Assembly |
|          |          | Less Optional Tractor Cord     |
| *        | S447     | 18' Complete Lighting Assembly |
|          |          | Less Optional Tractor Cord     |
| *        | S448     | 20' Complete Lighting Assembly |
|          |          | Less Optional Tractor Cord     |

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

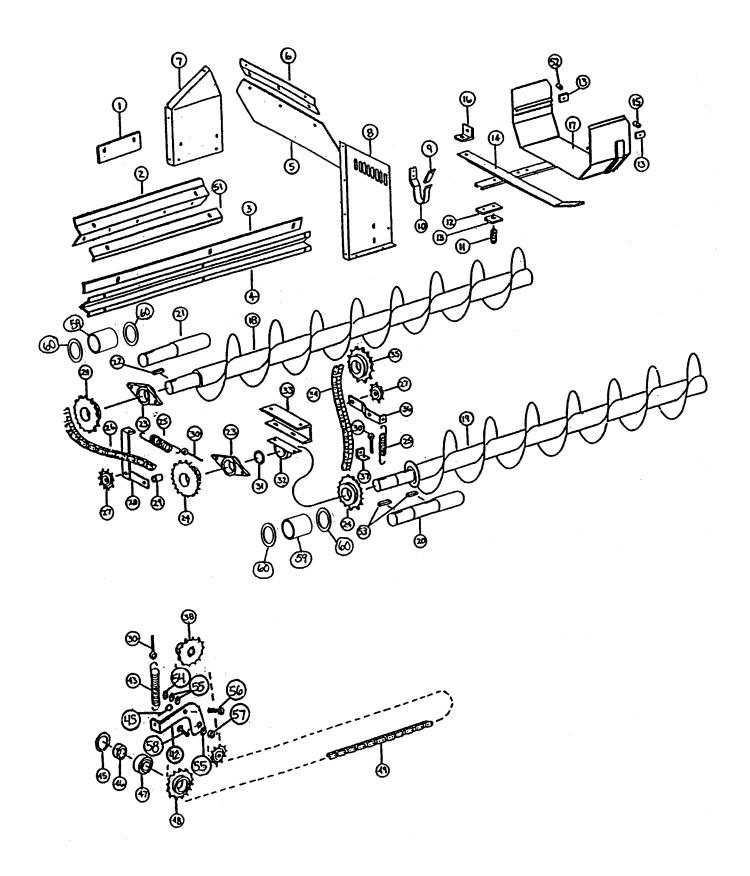
# FIGURE 1 HOUSING COMPONENTS FOR UNITS

| ITEM | PART NO. | DESCRIPTIONS                   |
|------|----------|--------------------------------|
| 1.   | ST82     | Poly Hold down and Seal Holder |
| 2.   | ST2      | Poly Liner for Rear Auger      |
| 3.   | ST3      | Poly Liner for Front Auger     |
| 4.   | ST83     | Auger Housing                  |
| 5.   | S4       | LH Side Panel                  |
| 6.   | S5       | LH Emergency Stop Panel        |
| 7.   | S370     | Emergency Stop Panel           |
| 8.   | ES14     | Thimble (2)                    |
| 9.   | ES15     | Cable Clamp (2)                |
| 10.  | S7       | Spring for Emergency Stop      |
| 11.  | S8       | Emergency Stop Cable           |
| 12.  | S9       | RH Side Panel Top              |
| 13.  | ST5      | RH Side Panel                  |
| 14.  | S11      | RH Emergency Stop Panel        |
| 15.  | S12      | Gearbox Brace                  |
| 16.  | ST84     | Front Main Panel               |
| 17.  | ST7      | LH Front Angle                 |
| 18.  | S3       | LH Side Panel Top              |
| 19.  | S20      | Apron Side Spacer              |
| 20.  | PB74     | Drive Shaft Panel              |
| 21.  | ST66     | Auger Drive Shield             |
| 22.  | ST9      | Auger Chain Shield             |
| 23.  | ST67     | Wiper End                      |
| 24.  | S306     | Rubber Seal                    |
| 25.  | S288     | Rubber Seal Strap              |
| 26.  | S522     | Manual Holder                  |
| 30.  | CHM38    | Plug Storage                   |
|      |          |                                |



# FIGURE 2 BEATERS AND MAIN APRON DRIVE

| ITEM | PART NO. | DESCRIPTION                            | ITEM | PART NO. | DESC                         | RIPTION                   |
|------|----------|--|------|----------|------------------------------|---------------------------|
| 1.   | F73      | Snap Ring                              | 38.  | S46      | Grease                       | e Line Bracket            |
| 2.   | F16      | Lock Collar                            | 39.  | S47      | Grease Line Fitting          |                           |
| 3.   | F114     | Bearing Flange w/Zerk                  | 40.  | S48      | Short (                      | Grease Line               |
| 4.   | F115     | Bearing Greaseable Type                | 41.  | S49      | Long (                       | Grease Line               |
| 5.   | F14      | Bearing Flange                         | 42.  | S50      | Drive S                      | Shaft Bushing             |
| 6.   | S23      | LH Beater Stub Shaft                   | 43.  | S51      | LH Dri                       | ve Shaft Bracket          |
| 7.   | S24      | RH Beater Stub Shaft                   | 44.  | S52      | RH Dri                       | ive Shaft Bracket         |
| 8.   | S25      | Beater                                 | 45.  | S53      | Center                       | Bearing Bracket           |
| 9.   | G23      | 5/16" x 1-3/8" Square Key              | 46.  | S54      | T-Rod                        | Slat w/Att. Links         |
| 10.  | F114A    | Bearing Flange w/Zerk 45 Degree        |      | S233     | 667H F                       | Pintle Slat w/Att. Links  |
| 11.  | S218     | 3/8" Spacer                            | 47.  | S55      | T-Rod                        | Standard Link             |
| 12.  | S26      | 3rd Beater Sprocket 20T                | 48.  | S56      | T-Rod                        | Connector Link            |
| 13.  | S219     | 1/4" Spacer                            |      | 11S51    | 667H I                       | Pintle Connector Link     |
| 14.  | K60      | Nut                                    |      | 11S50    | 667H F                       | Pintle Att. Link RH or LH |
| 15.  | X67      | Washer                                 | 49.  | S57      | T-Rod                        | Complete Apron 14' Box    |
| 16.  | S27      | Wood Chain Tightener                   |      | S230     | 667H Pintle Apron 14'        |                           |
| 17.  | S28      | Carriage Bolt                          |      | S58      | T-Rod                        | Complete Apron 16' Box    |
| 18.  | X58      | 2nd to 3rd Beater Chain 89 Pitches #50 |      | S231     | 667H Pintle Apron 16'        |                           |
| 19.  | S30      | 2nd Beater Sprocket 30T - 13T          |      | S59      | T-Rod Complete Apron 18' Box |                           |
| 20.  | S31      | 1st to 2nd Beater Chain 98 Pitches #50 |      | S232     | 667H Pintle Apron 18'        |                           |
| 21.  | X58      | Beater Drive Chain 89 Pitches #50      | 50.  | S60      | Rear Idler Sprocket          |                           |
| 22.  | 10R32    | Snap Ring                              | 51.  | S61      | Idler Shaft Spacer           |                           |
| 23.  | S33      | Chain Tightener Bushing                | 52.  | S62      | LH Rear Idler Bracket        |                           |
| 24.  | S34      | Tightener Sprocket w/Bushing           | 53.  | A7       | Tighte                       | ner Bolt                  |
| 25.  | L10R35   | Chain Tightener Bracket                | 54.  | S63      | Rear Id                      | dler Shaft                |
| 26.  | S36      | Drive Shaft Spacer                     | 55.  | S64      | Center                       | dler Bracket              |
| 27.  | S37      | Apron Drive Shaft Sprocket             | 56.  | S65      | RH Re                        | ar Idler Bracket          |
| 28.  | S436     | 3/8" x 1-1/2" Square Key               | 57.  | ST11     | Worm                         | Gear Shaft Sprocket 13T   |
| 29.  | S327     | Poly Gearbox Washer                    |      | S66      | Slow D                       | Down Sprocket 11T         |
| 30.  | S38      | 3/8" x 2-3/8" Square Key               | 58.  | S67      | Grease                       | e Line Clip               |
| 31.  | ST10     | Apron Drive Chain 56 Pitches #80       | 59.  | S68      | Main A                       | Apron Drive Shaft         |
| 32.  | S40      | Chain Tightener                        | 60.  | S216     | Chain                        | Tightener Assembly        |
| 33.  | S41      | Bushing                                | 61.  | S371     | Cable                        | Bracket                   |
| 34.  | S42      | 1st Beater Sprocket 60T-20T            |      |          |                              |                           |
| 35.  | S43      | Drive Shaft Brace                      | _    |          |                              | NOT SHOWN                 |
| 36.  | S44      | Bushing                                |      |          | F157                         | #80 Connector Link        |
| 37.  | S45      | Apron Drive Sprocket 30T               |      |          | F158                         | #80 Offset Link           |
|      |          |  |      |          | X60                          | #50 Offset Link           |
|      |          |  |      |          | X61                          | #50 Connector Link        |



# FIGURE 3 AUGERS AND DRIVE COMPONENTS

| ITEM  | PART NO.     | DESCRIPTION               | ITEM | PART NO. | DESCRIPTION                |
|-------|--------------|---------------------------|------|----------|----------------------------|
| 1.    | ST68         | Poly Hold down            | 30.  | ES10     | 5/16" x 3" I-Bolt          |
| 2.    | ST69         | Auger Center Wiper        | 31.  | F73      | Snap Ring                  |
| 3.    | X83          | Wiper Blade               | 32.  | 12N36    | Bearing Assembly           |
| 4.    | ST14         | Front Wiper Blade Holder  | *    | 12N33    | Bearing                    |
| 5.    | ST15         | Poly Shield               | *    | 12N34    | Bearing Cover              |
| 6.    | ST16         | Poly Shield Bracket       | *    | 12N35    | Bearing Holder             |
| 7.    | ST17         | Extension Panel Rear      | 33.  | ST63     | Auger Bearing Bracket      |
| 8.    | ST18         | Extension Panel Front     | 34.  | X58      | #50 Roller Chain 89 Pitch  |
| 9.    | S78          | PTO Holder Rubber Tab     | 35.  | ST59     | Sprocket 20T               |
| 10.   | S354         | PTO Holder                | 36.  | ST32     | Tightener Bracket          |
| 11.   | S7           | Spring                    | 37.  | ST33     | Angle                      |
| 12.   | ST19         | Bottom Poly Slide         | 38.  | S82      | 24T Sprocket               |
| 13.   | ST20         | Poly Slide                | 42.  | S459     | Tightener Bracket          |
| 14.   | ST21         | Handle for Extension      | 43.  | ST36     | Spring                     |
| 15.   | ST81         | Spacer                    | 44.  | K79      | I-Bolt                     |
| 16.   | ST22         | Angle                     | 45.  | K92      | Snap Ring                  |
| 17.   | ST23         | Extension Shell           | 46.  | 4C9      | Lock Collar                |
| 18.   | ST24         | Rear Auger                | 47.  | K90      | Bearing                    |
| 19.   | ST25         | Front Auger               | 48.  | K89      | Idler Sprocket 20T         |
| 20.   | ST26         | Front Auger Stub Shaft    | 49.  | ST85     | #50 Roller Chain 183 Pitch |
| 21.   | ST27         | Rear Auger Stub Shaft     | 51.  | ST72     | Center Wiper               |
| 22.   | G23          | 5/16" x 1-3/8" Key        | 52.  | ST77     | 3/8" Spacer                |
| 23.   | 12N29        | Bearing                   | *    | X60      | #50 Offset Link            |
| 24.   | ST28         | Sprocket                  | *    | X61      | #50 Connector Link         |
| 25.   | R27          | Spring                    | 53.  | WM121    | Sq. Key 5/16" x 1"         |
| 26.   | ST29         | #50 Roller Chain 61 Pitch | 54.  | A34      | Washer 1/2"                |
| 27.   | K101         | Tightener Sprocket        | 55.  | S468     | Washer                     |
| 28.   | ST30         | Tightener Bracket         | 56.  | 16SV126  | Counter Sunk Bolt 2"       |
| 29.   | L12R22       | Spacer                    | 57.  | R65      | Spacer 3/8"                |
| NOTE: | * (Means Not | Shown)                    | 58.  | S467     | Counter Sunk Bolt 2-1/4"   |
|       |              |                           | 59.  | ST92     | Conduit Spacer             |
|       |              |                           | 60.  | ST93     | Auger Spacer Washer        |

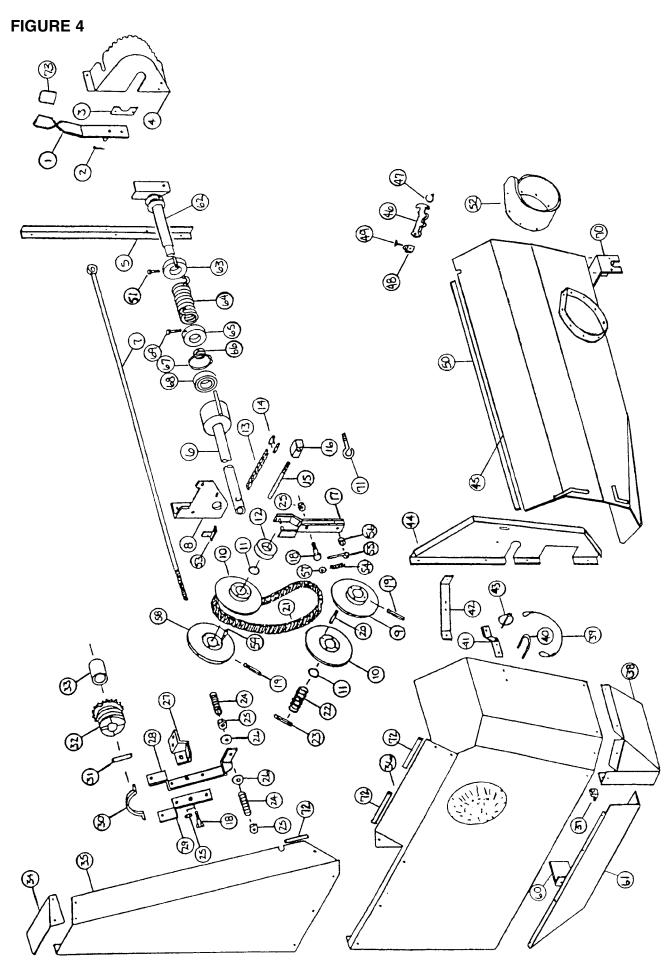
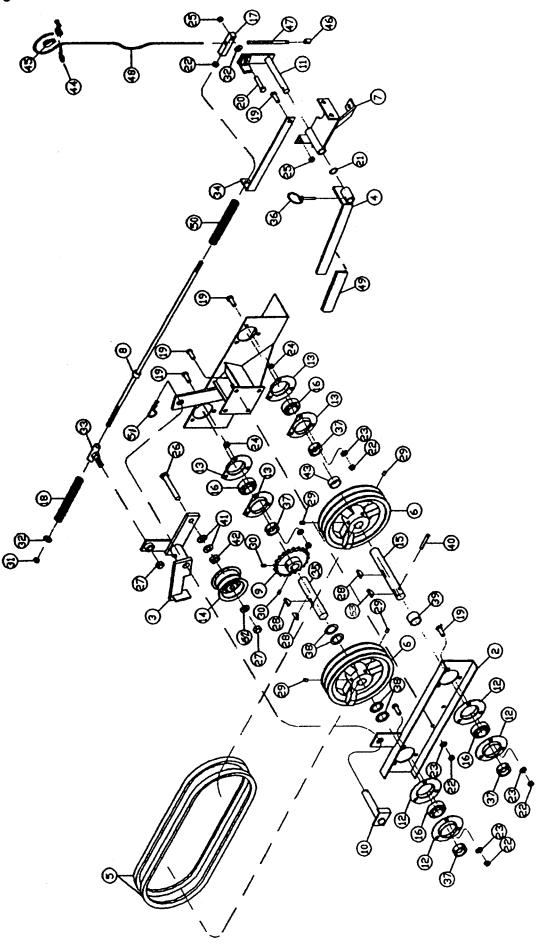


FIGURE 4
SHIELDS - BEATER CLUTCH - BELT DRIVE

| ITEM | PART NO. | DESCRIPTION                  | ITEM | PART NO. | DESCRIPTION                 |
|------|----------|------------------------------|------|----------|-----------------------------|
| 1.   | S364     | Shifter Handle               | 38.  | ST40     | Side Shield Bottom          |
| 2.   | X43      | Cotter Pin                   | 39.  | S122     | Clip Pin Cable              |
| 3.   | S91      | Shifting Pipe Bracket        | 40.  | F32      | U-Bolt                      |
| 4.   | S360     | Speed Selector Panel         | 41.  | S123     | Shield Latch Bracket        |
| 5.   | S365     | Front Center Angle           | 42.  | S234     | Shield Brace                |
| 6.   | S366     | Shifting Pipe (Apron)        | 43.  | F56      | Clip Pin                    |
| 7.   | S367     | Shifting Rod (Beater)        | 44.  | ST86     | Front Upright Shield        |
| 8.   | S96      | Shifting Bracket             | 45.  | S334     | Front Shield                |
| 9.   | S97      | Stationary Sheave            | 46.  | X192     | Front Shield Latch (Rubber) |
| 10.  | S295     | Sliding Sheave               | 47.  | X193     | Latch Catch Bracket         |
| 11.  | S99      | O-Ring                       | 48.  | X194     | Latch Mounting Bracket      |
| 12.  | S100     | Thrust Bearing               | 49.  | X195     | Pin                         |
| 13.  | S101     | #40 Chain 5 Pitch            | 50.  | S359     | Plastic Edging 38"          |
| 14.  | S102     | #40 Connector Link           | 51.  | X111     | Bolt 3/8" x 1" GR.5         |
| 15.  | S103     | Linkage Rod                  | 52.  | S131     | PTO Rubber Shield           |
| 16.  | S104     | Adjustment Block             | 53.  | S221     | Spring Shift Bracket        |
| 17.  | S105     | Variable Speed Shifter       | 54.  | S222     | Shifting Spring             |
| 18.  | R10      | 1/2" x 1-1/4" Bolt GR.5      | 55.  | S220     | Shifting Spring Rod         |
| 19.  | S106     | 5/16" x 2-3/4" Expansion Pin | 56.  | K94      | Spacer                      |
| 20.  | S296     | Sheave Pin                   | 57.  | T16      | 1/4" Flat Washer            |
| 21.  | S108     | Variable Speed Belt          | 58.  | S97      | Sheave                      |
| 22.  | S109     | Spring                       | 59.  | S296     | Sheave Pin                  |
| 23.  | S110     | 1/4" x 2" Expansion Pin      | 60.  | ST45     | Inside Shield               |
| 24.  | S111     | Spring                       | 61.  | ST39     | Lower Side Shield           |
| _25. | 9S17     | 1/2" Lock Nut                | 62.  | S290     | Shifter Pipe Handle End     |
| 26.  | S285     | Beater Clutch Washer         | 63.  | S291     | Spring Pin Collar           |
| 27.  | S112     | Beater Clutch Bracket        | 64.  | S292     | Spring                      |
| 28.  | S113     | Beater Clutch Long Arm       | 65.  | S293     | Spring Collar               |
| 29.  | S114     | Beater Clutch Short Arm      | 66.  | 4C9      | Lock Collar                 |
| 30.  | ST58     | Clutch Yoke                  | 67.  | K92      | Snap Ring                   |
| 31.  | S115     | Beater Clutch Pin            | 68.  | K90      | Bearing                     |
| 32.  | S116     | Beater Clutch Sprocket       | 69.  | 17G141   | Bolt 3/8" x 1-1/4" GR.5     |
| 33.  | S117     | Beater Clutch Bushing        | 70.  | S346     | Light Bracket               |
| 34.  | S118     | Beater Shield Top            | 71.  | BFR319   | I-Bolt                      |
| 35.  | S119     | Beater Side Shield           | 72.  | S328     | Edging 3-1/2"               |
| 36.  | S120     | Main Side Shield             | 73.  | S403     | Handle Grip                 |
| 37.  | D58      | Shield Angle                 | *    | S368     | Complete Shifter            |

NOTE: \* (Means Not Shown)



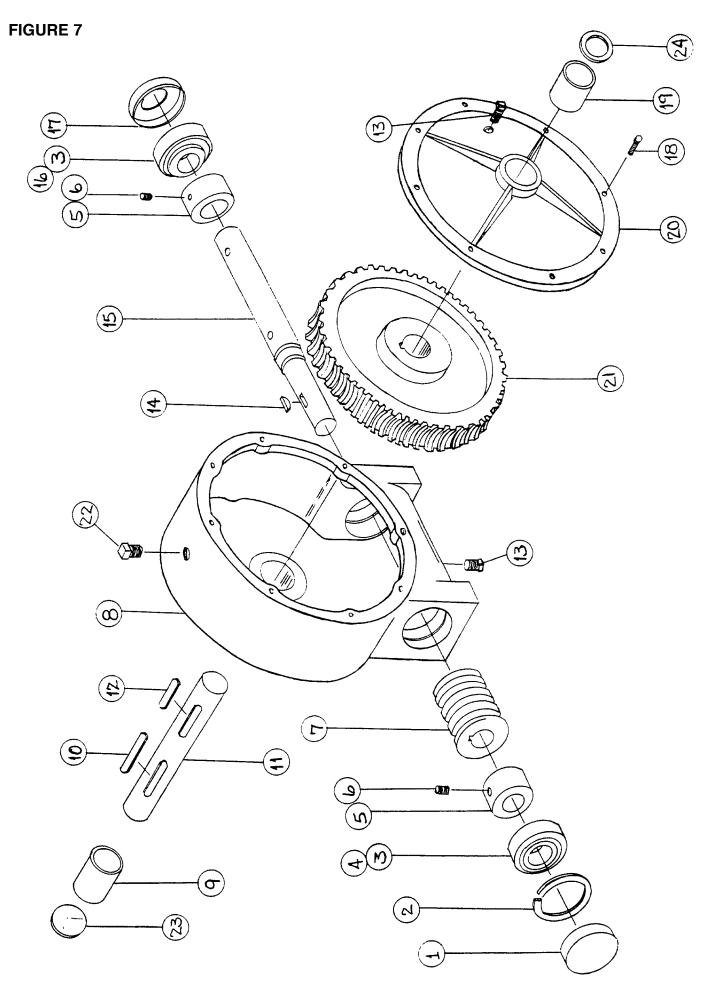
# FIGURE 5 CROSS CONVEYOR CLUTCH - BELT DRIVE

| ITEMPART NO. | DESCRIPTION |                              |
|--------------|-------------|------------------------------|
| 2.           | S335        | Front Clutch Plate           |
| 3.           | S341        | Idler-Stop Assembly          |
| 4.           | S337        | Handle Lever                 |
| 5.           | S332        | Drive Belt Set               |
| 6.           | S342        | Pulley                       |
| <del></del>  | S339        | Handle Mount                 |
| 8.           | S343        | Shifting Rod                 |
| 9.           | 11S19       | Sprocket 50B20               |
| 10.          | S340        | Tightener Pivot Shaft        |
| 11.          | S338        | Handle Lever                 |
| 12.          | 4C7         | Bearing Flange               |
| 13.          | X85         | Bearing Flange Sheared       |
| 14.          | K156        | Idler Pulley                 |
| 15.          | S458        | Input Pulley Shaft           |
| 16.          | 4C8         | Bearing                      |
| 17.          | S347        | Shifter Rod End              |
| 18.          | 23N211      | Spring 3/4"                  |
| 19.          | X111        | 3/8" x 1" Bolt GR.5          |
| 20.          | BFR320      | 3/8" x 1-3/4" Bolt GR.2      |
| 21.          | S352        | Internal Star Washer         |
| 22.          | K60         | 3/8" Nut                     |
| 23.          | B68         | 3/8" Lockwasher              |
| 24.          | S355        | 3/8" Jam Nut                 |
| 25.          | K25         | 3/8" Locknut                 |
| 26.          | 16SV91      | 1/2" x 3-1/4" Bolt GR.5      |
|              | R11         | 1/2" Top Locknut             |
| 28.          | 5B10        | 1/4" x 1" Woodruff Key       |
| 29.          |             | 3/8" Setscrew                |
| 30.          |             | 5/16" Setscrew               |
| 31.          | A14         | 3/8" Nylock Nut              |
| 32.          | X67         | 3/8" Flatwasher              |
| 33.          | S344        | Clutch Rod Slide             |
| 34.          | S348        | Spring Bracket               |
| 35.          | S349        | Drive Pulley Shaft           |
| 36.          | S438        | Clip Pin                     |
| 37.          | 4C9         | Bearing Lock Collar          |
| 38.          | S345        | Spacer (.074)                |
| 39.          | K99         | Spacer, 7/8"                 |
| 40.          | BFR335      | 5/16" x 2" Expansion Pin     |
| 41.          | K68         | 1/2" Lockwasher              |
| 42.          | X112        | Spacer, 9/16"                |
| 43.          | K106        | Spacer, 1/2"                 |
| 44.          | BFR220      | Cable Clamp                  |
| 45.          | ES4         | Thimble                      |
| 46.          | ES5         | Cable Compression Sleeve     |
| 47.          | S361        | Stop Cable Stiffener         |
| 48.          | S358        | Emergency Stop Cable         |
| 49.          | S362        | Handle Lever Grip            |
| 50.          | S369        | Spring 5/8"                  |
| 51.          | ES7         | Hair Pin                     |
| 52.          | R35         | 1/2" Lock Washer (As Needed) |
| 53.          | S135        | 1/4" x 1-1/4" Square Key     |
|              |             |                              |

# FIGURE 6 BEVEL GEARBOX

| ITEM | PART NO. | DESCRIPTION              |
|------|----------|--------------------------|
| 1.   | 5B10     | 1/4" x 1" Woodruff Key   |
| 2.   | ST46     | Gearbox Side Shaft       |
| 3.   | 3G9      | Seal                     |
| 4.   | 3G19     | Snap Ring                |
| 5.   | 3G18     | Race #15245              |
| 6.   | 3G7      | Bearing #15101           |
| 7.   | 3G5      | Gear                     |
| 8.   | 3G1      | Gearbox Housing          |
| 9.   | 3G2      | Gearbox Gasket           |
| 10.  | 3G20     | Fill Plug                |
| 11.  | 3G3      | Cover                    |
| 12.  | 3G9      | Seal                     |
| 13.  | 3G11     | Nut                      |
| 14.  | 5B10     | 1/4" x 1" Woodruff Key   |
| 15.  | S134     | Gearbox Front Shaft      |
| 16.  | S135     | 1/4" x 1-1/4" Square Key |
| 17.  | 3G4      | Nut                      |
| 18.  | L3G24    | Gearbox Bearing #15113   |
| 19.  | S136     | Seal                     |
| *    | ST47     | Gearbox Complete         |

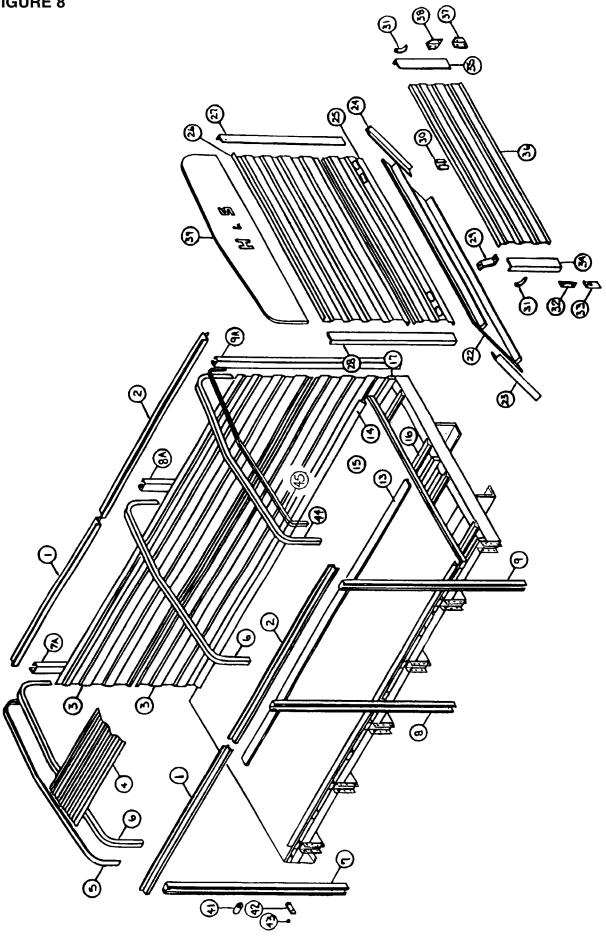
NOTE: \* (Means Not Shown)



# FIGURE 7 WORM GEARBOX

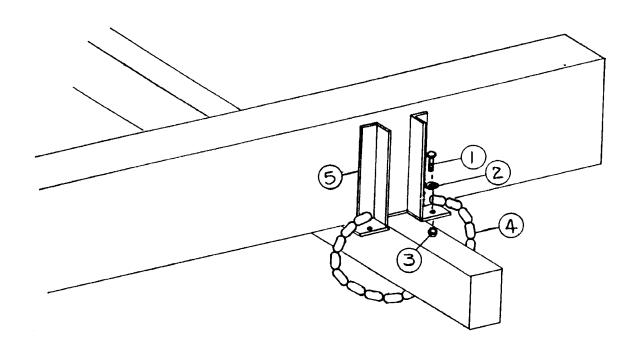
| ITEM | PART NO. | DESCRIPTION                          |
|------|----------|--------------------------------------|
| 1.   | G90      | Dust Cap                             |
| 2.   | 3G19     | Snap Ring                            |
| 3.   | 3G18     | Race #15245                          |
| 4.   | 3G7      | Bearing #15101                       |
| 5.   | X9       | Spacer                               |
| 6.   | G83      | Set Screw                            |
| 7.   | G76      | Worm                                 |
| 8.   | G114     | Gearbox Housing                      |
| 9.   | X8       | Gearbox Bushing                      |
| 10.  | S138     | 3/8 x 2-3/8" Square Key w/Round Ends |
| 11.  | S139     | Worm Gear Side Shaft                 |
| 12.  | S437     | 3/8 x 1-3/8" Square Key w/Round Ends |
| 13.  | G65      | Plug 3/8"                            |
| 14.  | 5B10     | 1/4 x 1" Woodruff Key                |
| 15.  | S140     | Worm Gear Front Shaft                |
| 16.  | L3G24    | Gearbox Bearing #15113               |
| 17.  | G115     | Seal                                 |
| 18.  | G84      | Cap Screw                            |
| 19.  | X75      | Cover Bushing                        |
| 20.  | G116     | Worm Gearbox Cover                   |
| 21.  | G77      | Worm Gear                            |
| 22.  | G91      | Vent Plug                            |
| 23.  | G117     | Сар                                  |
| 24.  | G120     | Seal 1-7/8"                          |
| *    | G118     | Worm Gearbox Complete                |
|      |          |                                      |

NOTE: \* (Means Not Shown)



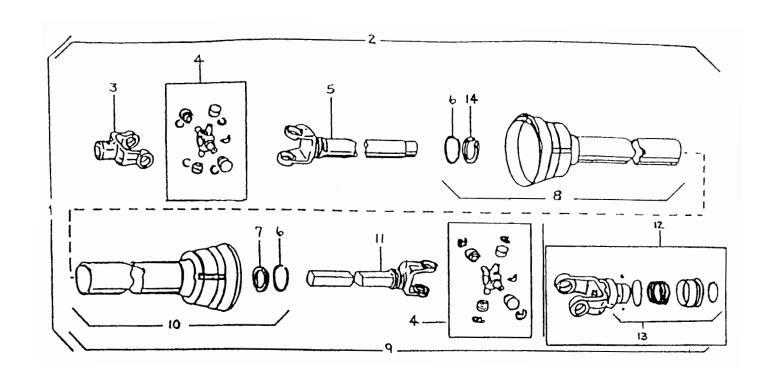
# FIGURE 8 BOX COMPONENTS

| ITEM     | PART NO.     | DESCRIPTION                   | ITEM        | PART NO.     | DESCRIPTION                       |  |
|----------|--------------|-------------------------------|-------------|--------------|-----------------------------------|--|
| 1.       | S142         | 14' Roof Sill Front Section   |             |              | 20' Apron Chain Side Spacer       |  |
| • •      | S143         | 16' Roof Sill Front Section   |             | S489         | 21' Apron Chain Side Spacer       |  |
|          | S470         | 17' Roof Sill Front Section   |             | S507         | 22' Apron Chain Side Spacer       |  |
|          | S144         | 18' Roof Sill Front Section   | 15.         | S168         | 14' Floor Assembly                |  |
|          | S471         | 19' Roof Sill Front Section   |             | S169         | 16' Floor Assembly                |  |
|          | S423         | 20' Roof Sill Front Section   |             | S490         | 17' Floor Assembly                |  |
|          | S472         | 21' Roof Sill Front Section   |             | S170         | 18' Floor Assembly                |  |
|          | S502         | 22' Roof Sill Front Section   |             | S491         | 19' Floor Assembly                |  |
| 2.       | S145         | 14' Roof Sill Back Section    |             | S429         | 20' Floor Assembly                |  |
|          | S146         | 16' Roof Sill Back Section    |             | S492         | 21' Floor Assembly                |  |
|          | S473         | 17' Roof Sill Back Section    |             | S508         | 22' Floor Assembly                |  |
|          | S147         | 18' Roof Sill Back Section    | 16.         | S408         | 14' Apron Chain Return Slide      |  |
|          | S474         | 19' Roof Sill Back Section    |             | S271         | 16' Apron Chain Return Slide      |  |
|          | S424         | 20' Roof Sill Back Section    |             | S493         | 17' Apron Chain Return Slide      |  |
|          | S475         | 21' Roof Sill Back Section    |             | S272         | 18' Apron Chain Return Slide      |  |
|          | S503         | 22' Roof Sill Back Section    |             | S494         | 19' Apron Chain Return Slide      |  |
| 3.       | S148         | 14' Side Steel                |             | S430         | 20' Apron Chain Return Slide      |  |
| 0.       | S149         | 16' Side Steel                |             | S495         | 21' Apron Chain Return Slide      |  |
|          | S476         | 17' Side Steel                |             | S509         | 22' Apron Chain Return Slide      |  |
|          | S150         | 18' Side Steel                | 17.         | S174         | 14' Floor Support 2x4             |  |
|          | S477         | 19' Side Steel                |             | S175         | 16' Floor Support 2x4             |  |
|          | S425         | 20' Side Steel                |             | S496         | 17' Floor Support 2x4             |  |
|          | S478         | 21' Side Steel                |             | S176         | 18' Floor Support 2x4             |  |
|          | S504         | 22' Side Steel                |             | S497         | 19' Floor Support 2x4             |  |
| 4.       | S151         | 14' Roof Steel (5)            |             | S431         | 20' Floor Support 2x4             |  |
|          | S152         | 16' Roof Steel (5)            |             | S498         | 21' Floor Support 2x4             |  |
|          | S479         | 17' Roof Steel                |             | S510         | 22' Floor Support 2x4             |  |
|          | S153         | 18' Roof Steel (5)            | 22.         | S184         | Rear Slant Panel                  |  |
|          | S480         | 19' Roof Steel                | 23.         | S185         | LH Angle for Slant Panel          |  |
|          | S426         | 20' Roof Steel                | 24.         | S186         | RH Angle for Slant Panel          |  |
|          | S481         | 21' Roof Steel                | 25.         | S307         | Back Door Center Steel            |  |
|          | S505         | 22' Roof Steel                | 26.         | S188         | Back Door Upper Steel             |  |
| 5.       | S154         | Branch Guard (14'-16')        | 27.         | S189         | Back Door RH Side Piece           |  |
| 5A.      | ST61         | Branch Guard (18'-20'-22')    | 28.         | S190         | Back Door LH Side Piece           |  |
| _5B.     | S482         | Branch Guard (17'-19'-21')    | 29.         | S191         | Slant Panel Brace                 |  |
| <u> </u> | S155         | Roof Support (14'-16')        | 30.         | F97          | SMV Holder                        |  |
| 6A.      | ST60         | Roof Support (18'-20'-22')    | 31.         | S192         | Handle Nut                        |  |
| 6B.      | S483         | Roof Support (17'-19'-21')    | 32.         | S193         | LH Hinge Top Piece                |  |
| 7.       | ST48         | LH Front Stake                | 33.         | S194         | LH Hinge Bottom Piece             |  |
| 7A.      | ST48         | RH Front Stake                | 34.         | S195         | Tailgate LH Side Piece            |  |
| 8.       | ST49         | LH Side Stake                 | 35.         | S196         | Tailgate RH Side Piece            |  |
| 8A.      | ST49         | RH Side Stake                 | 36.         | S197         | Tailgate Steel                    |  |
| 9.       | ST50         | LH Back Stake                 | 37.         | S198         | RH Hinge Bottom Piece             |  |
| 9A.      | ST51         | RH Back Stake                 | 38.         | S199         | RH Hinge Top Piece                |  |
| 13.      | S162         | 14' Apron Chain Center Spacer | 39.         | S453         | Back Door Top Panel (14'-16')     |  |
|          | S163         | 16' Apron Chain Center Spacer | 39A.        | S454         | Back Door Top Panel (18'-20'-22') |  |
|          | S484         | 17' Apron Chain Center Spacer | 39B.        | S499         | Back Door Top Panel (17'-19'-21') |  |
|          | S164         | 18' Apron Chain Center Spacer | 41.         | ST55         | Stake Spacer                      |  |
|          | S485         | 19' Apron Chain Center Spacer | 42.         | ST56         | Cable Bracket                     |  |
|          | S403<br>S427 | 20' Apron Chain Center Spacer | 42.<br>43.  | ST50<br>ST57 | Plastic Grommet for Cable         |  |
|          | S427<br>S486 | 21' Apron Chain Center Spacer | 43.<br>44.  | S235         | Rear Roof Support (14'-16')       |  |
|          | S466<br>S506 |                               | 44.<br>44A. | S235<br>S236 | • • • • •                         |  |
| 4.4      |              | 22' Apron Chain Center Spacer |             |              | Rear Roof Support (18'-20'-22')   |  |
| 14.      | S165         | 14' Apron Chain Side Spacer   | 44B.        | S500         | Rear Roof Support (17'-19'-21')   |  |
|          | S166         | 16' Apron Chain Side Spacer   | 45.         | S154         | Rear Branch Guard (14'+16')       |  |
|          | S487         | 17' Apron Chain Side Spacer   | 45A.        | ST61         | Rear Branch Guard (18'-20'-22')   |  |
|          | S167         | 18' Apron Chain Side Spacer   | 45B.        | S501         | Rear Branch Guard (17'-19'-21')   |  |
|          | S488         | 19' Apron Chain Side Spacer   |             |              |                                   |  |



# FIGURE 9 TIE DOWN KIT

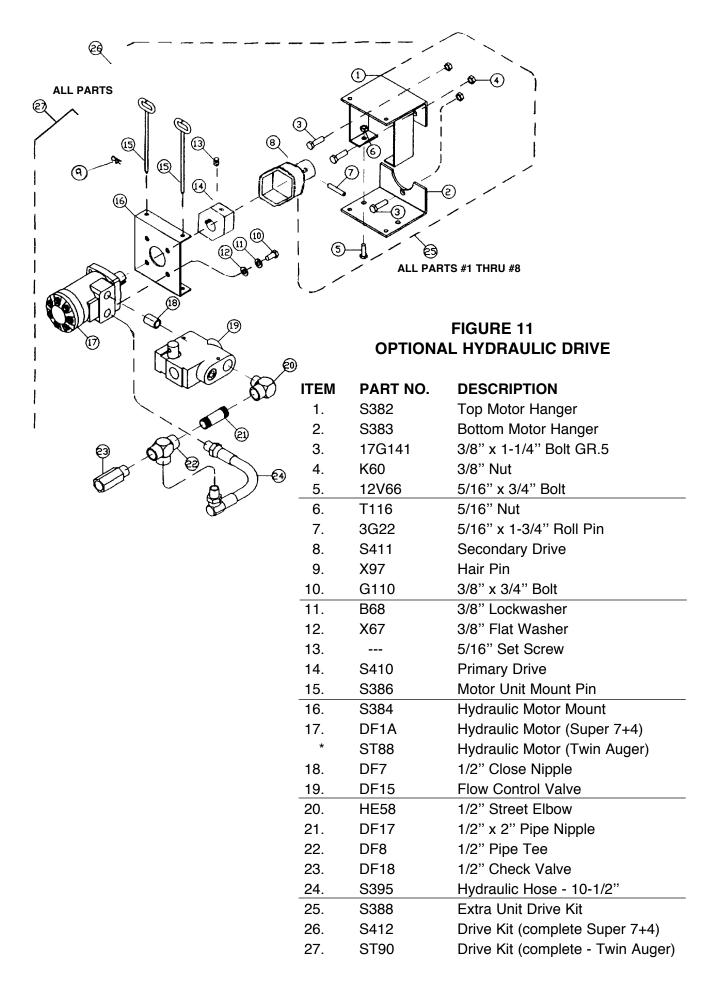
| ITEM | PART NO. | DESCRIPTION             |
|------|----------|-------------------------|
| 1.   | 12V45    | 1/2" x 1-1/2" GR.5 Bolt |
| 2.   | K68      | 1/2" Flat Washer        |
| 3.   | R11      | 1/2" Top Lock Nut GR.5  |
| 4.   | S322     | 1/4" Chain 30-1/4" Long |
| 5.   | S323     | Tie Down Bracket        |
| 6.   | T9B      | Tie Down Kit (Complete) |



# FIGURE 10 PTO PARTS HD NEEDLE BEARING PTO

| ITEM | PART NO. | DESCRIPTION                                |  |
|------|----------|--|--|
| 1.   | S372     | PTO Assembly Complete                      |  |
| 2.   | S373     | Machine Half PTO W/Shield                  |  |
| 3.   | S374     | End Yoke - Machine Half                    |  |
| 4.   | S375     | "W" Repair Kit                             |  |
| 5.   | S376     | Yoke and Tube                              |  |
| 6.   | 24N26    | Bearing Retainer                           |  |
| 7.   | S206     | Nylon Bearing                              |  |
| 8.   | S397     | Inner Guard Includes Cent. & Item #6 & #14 |  |
| 9.   | S377     | Tractor Half PTO                           |  |
| 10.  | S398     | Outer Guard Includes Item #6 & #7          |  |
| 11.  | S378     | Yoke and Shaft                             |  |
| 12.  | S379     | Lock Yoke - Yoke Assembly                  |  |
| 13.  | S225     | Spring Lock Repair Kit                     |  |
| 14.  | S396     | Nylon Bearing                              |  |
| *    | S402     | Safety Manual                              |  |

NOTE: \* (Means Not Shown)



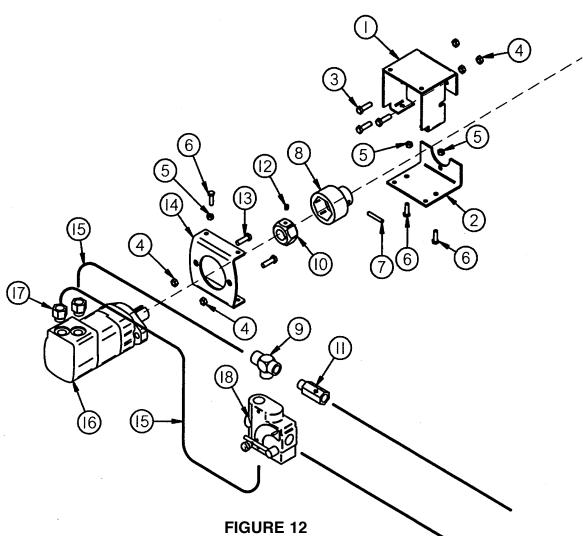


FIGURE 12
OPTIONAL FRONT HYDRAULIC DRIVE
(2000 SERIES)

| ITEM | PART NO. | DESCRIPTION                    |  |
|------|----------|--------------------------------|--|
| 1.   | S382     | Top Motor Hanger               |  |
| 2.   | S383     | Bottom Motor Hanger            |  |
| 3.   | 17G141   | 3/8" x 1-1/4" GR.5 Bolt        |  |
| 4.   | K60      | 3/8" Nut                       |  |
| 5.   | T116     | 5/16" Nut                      |  |
| 6.   | 12V66    | 5/16" x 3/4" Bolt              |  |
| 7.   | 3G22     | 5/16" x 1-3/4" Expansion Pin   |  |
| 8.   | S411     | Secondary Drive                |  |
| 9.   | S460     | Male-Female Tee (5604-12)      |  |
| 10.  | S463     | Primary Drive                  |  |
| 11.  | PB185    | Check Valve                    |  |
| 12.  | S435     | 5/16" Set Screw                |  |
| 13.  | LW134    | 3/8" x 1-1/2" GR. 5 Bolt       |  |
| 14.  | S464     | Hydraulic Motor Mount          |  |
| 15.  | S462     | Hydraulic Hose 3/4" x 44"      |  |
| 16.  | 16SV150  | Hydraulic Motor (104-1027-006) |  |
| 17.  | S461     | O'Ring Adapter                 |  |
| 18.  | 33SV74   | Flow Control Valve             |  |

# - SERVICE NOTES -

### **H&S H D 7+4 TWIN AUGER FORAGE BOX**

Your new H&S Forage Box 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 Forage Box before reading this manual carefully. Keep this manual available for ready reference.

# **H&S H D 7+4 TWIN AUGER SPECIFICATIONS**

| Power  |
|--|
| Feeder Apron Drive   |
| PTO Shaft Telescoping Integral Shielded                            |
| Speeds Complete Variable Speed                                     |
| Main Aprons 4 Chains-67 T-Rod-16,000 lb. Tensile Strength New Type |
| Conveyor Chain That is Virtually Maintenance Free                  |
| Beaters  |
| Emergency Stop Mechanism Standard Equipment - All Models           |
| Cross Conveyor Drive   |
| Cross Conveyor Width   |
| Discharge Left Side Unloading                                      |
| Inside Length  |
| Inside Width   |
| Overall Length   |
| Overall Width  |
| Overall Height   |
|  |
| SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE                    |

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