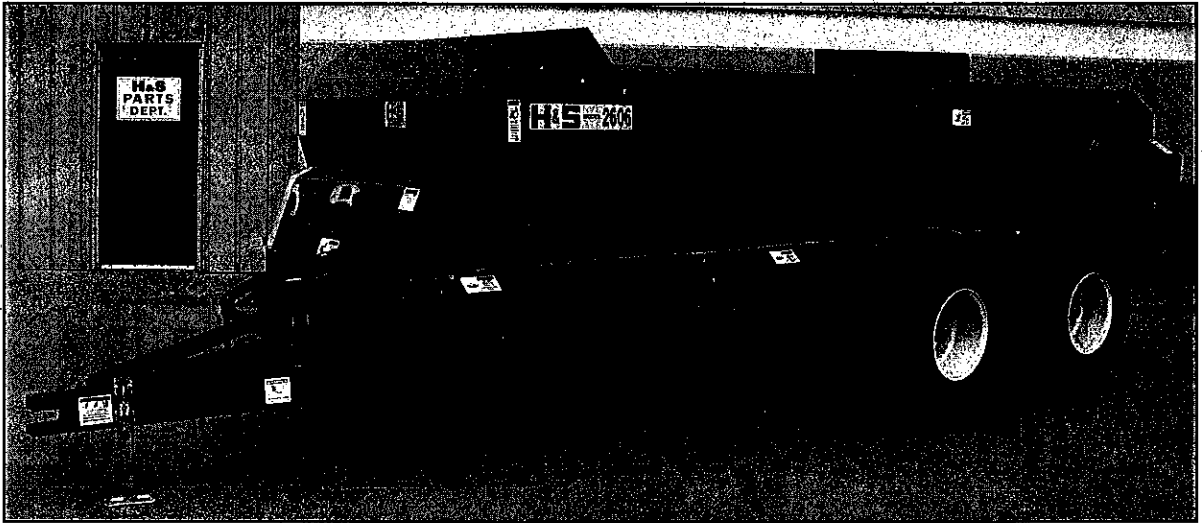


# H&S

## “ALL PURPOSE” Heavy Duty Manure Spreader



**WARNING** READ AND UNDERSTAND THIS MANUAL  
BEFORE OPERATING THIS EQUIPMENT.

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

**MODELS 1506, 1806, 2206, 2606 & 3306**

**PARTS & OPERATOR'S  
INSTRUCTIONS**

9-8-05

Manufactured By

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

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

MARSHFIELD, WISCONSIN 54449

# H&S ALL PURPOSE SPREADERS PARTS AND OPERATORS MANUAL

## CONTENTS

|  |                   |
|--|-------------------|
| Warranty & Warranty Registration Card .....                            | 1-2               |
| Dealer Pre-Delivery & Delivery Checklist .....                         | 3                 |
| Be Alert Symbol .....  | 5                 |
| Explanation of Safety Signs .....                                      | 6                 |
| Danger - Warning Signs .....   | 7-8               |
| Warning - Owner Must Read and Understand .....                         | 9                 |
| Operation - Attaching to Tractor - Loading .....                       | 10-11-12          |
| Spreading - Adjustments .....  | 13-14-15-16       |
| Lubrication Guide .....  | 17-18-19          |
| Decal Location & Identification .....                                  | 20-21             |
| Instructions for Ordering Parts - About Improvements .....             | 22                |
| Service Notes .....  | 23                |
| Figure 1 - Box & Component Parts - Description .....                   | 24-25             |
| Figure 2 - Augers & Drive Assembly - Description .....                 | 26-27             |
| Figure 2 - Continued .....   | 28-29             |
| Figure 3 - Shields - Sideshaft - Axle Assembly - Description .....     | 30-31             |
| Figure 3 - Continued .....   | 32-33             |
| Figure 4 - Beaters & Pan Assembly - Description .....                  | 34-35             |
| Figure 5 - Hydraulics - Description .....                              | 36-37             |
| Figure 6 - Outside Beater Gearbox - Description .....                  | 38-39             |
| Figure 7 - Inside Beater Gearbox - 1506-1806 - Description .....       | 40-41             |
| Figure 7A - Inside Beater Gearbox - 2206-2606-3306 - Description ..... | 42-43             |
| Figure 8 - Hydraulic Cylinder - Back Door - Description .....          | 44                |
| Figure 9 - Hydraulic Cylinder - Clean-Out Door - Description .....     | 45                |
| Figure 10 - PTO - 2004 & Prior Model Year Description .....            | 46                |
| Figure 11 - PTO - 2005 & After Model Year Description .....            | 47                |
| Figure 12 - Electric Control Box - Description .....                   | 48                |
| SPECIFICATIONS .....   | INSIDE BACK COVER |

# 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.**

### H&S MANUFACTURING CO., INC. WARRANTY

H&S Manufacturing Co., Inc. ("H&S") warrants this product to be free from defect in material and workmanship. Except as noted below, this warranty term is twelve (12) months from the date of delivery of the product to the original purchaser by an authorized H&S dealer. Under this warranty, H&S will repair or replace, at its option, any covered part which is found to be defective in material or workmanship during the applicable warranty term. In no case will the covered repair cost of a part or parts exceed the replacement cost of that part. Warranty service must be performed by H&S or a dealer authorized by H&S to sell and/or service the product involved, which will use only new or remanufactured parts or components furnished by H&S. This warranty includes approved parts and labor to fix the product but does not include, and the purchaser is responsible for, any service call and/or transportation of the product to and from the dealer's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service work not directly related to any defect covered under this warranty. This warranty includes only those components of the product manufactured by H&S. Warranty for any component not manufactured by H&S including, but not limited to, engines, batteries, tires, rims, hydraulic motors, pumps, etc., are covered by the warranty, if any, provided separately by their respective manufacturers.

This warranty in all its parts, is extended solely to the original purchaser of the product, is terminated upon any subsequent transfer or sale from or by the original purchaser and extends no third party benefits or rights whatsoever.

The warranty term for any product used in any commercial, custom for hire or rental application, is limited to six (6) months from the date of delivery of the product to the original purchaser by an authorized H&S dealer.

Polybonded (polyethylene and plywood) panels utilized in H&S Manure Spreaders are warranted, to the original purchaser, to not wear through and the polyethylene overlay to not tear free of the plywood for the functional life to the spreader. This specific warranty on polybonded panels includes only replacement of any defective panel part without any allowance for labor beyond the terms of the general warranty (12 or 6 months), and is further limited to manure spreaders used to spread normal agricultural manure.

This warranty does not include: (1) Any product that has been altered or modified in ways not approved by H&S; (2) Depreciation or damage caused by normal wear, misuse, improper or insufficient maintenance, improper operation, accident or failure to follow the product Operator Manual recommendations and product decal recommendations; (3) Normal maintenance parts and service; (4) Repairs made with parts other than those available from H&S or performed by anyone other than H&S or a dealer authorized by H&S to sell and/or service the product involved.

To secure warranty service the purchaser must report the product defect to a dealer authorized by H&S to sell and/or service the product involved within the applicable warranty term together with evidence of the warranty start date and make the product available to that dealer within a reasonable period of time.

**THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY.** H&S and the companies affiliated with it makes no warranties, representations, or promises, express or implied, as to the quality or performance or freedom from defect of its products other than those set forth above and **NO IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. IN NO EVENT WILL THE DEALER, H&S OR ANY COMPANY AFFILIATED WITH H&S BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** The **ONLY REMEDY** the purchaser has in connection with the breach of performance of any warranty on H&S products are those set forth above.

The selling dealer has no authority to make any representation or promise on behalf of H&S, or to modify the terms or limitations of this warranty in any way.

2/16/2004

### 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 Manure Spreader 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.
- All grease fittings have been lubricated and gearboxes filled to proper level – See lubrication guide in this manual.
- All mechanisms are operating trouble free.
- All Roller Chains are at proper tension.
- 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 Manure Spreader 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 recommended loads for different types of materials.
- 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 22 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 OPERATORS 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.





**! 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.

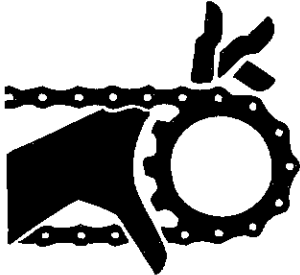
11599

**! 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.
- DO NOT EXCEED 20 MPH

72203




**! WARNING**

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

1404A

**! DANGER**

**! DANGER**

**KEEP OUT**

**DISENGAGE ALL POWER AND SHUT OFF TRACTOR ENGINE BEFORE ATTEMPTING TO ENTER OR CLEAN SPREADER**

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

111593B


**STAY CLEAR OF BEATER IF TRACTOR OR PTO IS RUNNING.**

**MANURE AND FOREIGN OBJECTS CAN BE THROWN CONSIDERABLE DISTANCES.**

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

**KEEP CLOTHING, YOURSELF AND OTHERS WELL CLEAR.**

9994




**! WARNING**

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

71494A

**! DANGER**

**! WARNING**

**DO NOT REMOVE SHIELDS**

**ROTATING PARTS INSIDE**

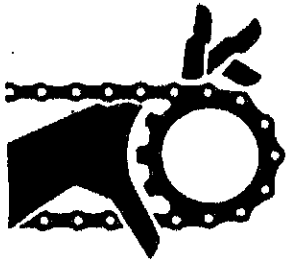
12794

**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.

1494L



**1494B**

**⚠ WARNING**

**DO NOT REMOVE SHIELDS**

**MOVING PARTS INSIDE**

**⚠ DANGER**



**NEVER ALLOW RIDERS ON THIS MACHINE**

**9194B**

**⚠ WARNING**



**DO NOT REMOVE SHIELDS**

**MOVING PARTS INSIDE**

**1494K**

**⚠ DANGER**



**NO STEP-STAY CLEAR**

**9194A**

**⚠ DANGER**



**5896B**

**ROTATING DRIVELINE CONTACT CAN CAUSE DEATH**

**⚠ WARNING**



**CRUSHING HAZARD**

**TO PREVENT SERIOUS INJURY OR DEATH:**

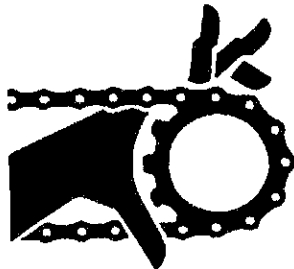
**KEEP HANDS AND BODY OUT OF HITCH AREA WHEN ATTACHING TOWING VEHICLE.**

**KEEP BODY CLEAR OF CRUSH POINT BETWEEN TOWING VEHICLE AND LOAD.**

**KEEP FEET AND LEGS CLEAR FROM UNDER TONGUE AREA IN CASE OF POSSIBLE JACK FAILURE.**


**82602**

**⚠ WARNING**



**DO NOT CLEAN OR WORK ON THIS MACHINE WITHOUT FIRST DISENGAGING POWER AND SHUTTING OFF TRACTOR ENGINE.**

**1494J**



**⚠ DANGER**

**STAY CLEAR OF BEATER IF TRACTOR OR PTO IS RUNNING**

**BEATER SHUT OFF COULD ACCIDENTALLY BE ENGAGED**

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

**KEEP CLOTHING, YOURSELF AND OTHERS WELL CLEAR**

# H&S "ALL PURPOSE" MANURE SPREADERS



## WARNING

### 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, disengage the power takeoff, stop the tractor engine and allow all mechanisms to stop before cleaning or working on the machine.

Never allow riders in or on the machine.

**DO NOT** get off the tractor while the spreader is in operation.

**DO NOT** attempt to perform maintenance or repair with tractor running and PTO and 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.

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 hydraulics.

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

**NEVER** start manure spreader until all guards and safety shields are secured in place.

**NEVER** hook up 1000 RPM tractor to the spreader unless spreader is equipped for 1000 RPM.

**STAY CLEAR** of hydraulic fittings, they may be under extreme pressure.

When transporting on the highway, regularly clean the reflective tape and SMV decal at the rear of the spreader.

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**

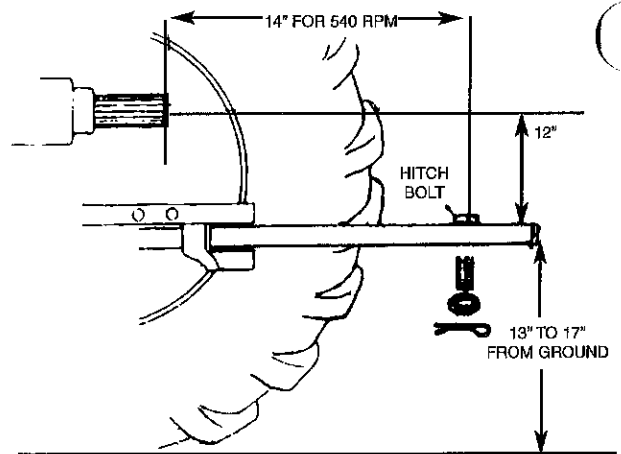
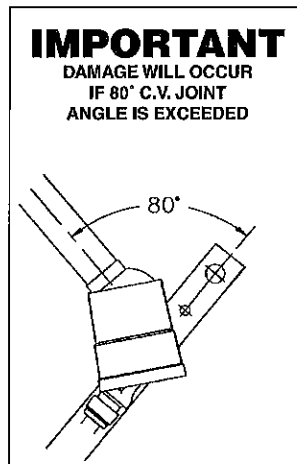
**ATTENTION - BE ALERT - YOUR SAFETY IS INVOLVED**

# OPERATION

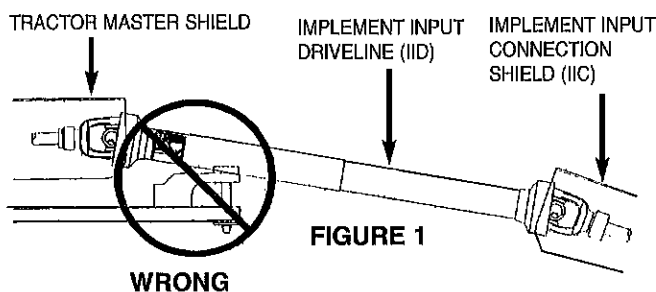
1. Check for proper assembly and adjustment and make sure that all bolts are tightened. Securely retighten after a few hours of operation, as bolts can loosen up on new machinery. Check wheel bolts upon delivery and periodically thereafter. Wheel bolts should be tightened at 85-95 ft./lbs. of torque.
2. Check the tires and inflate to the recommended pressure (11:00 x 22.5 tires to 40-60 pounds, 16.5 x 16.1 tires to 35-40 pounds).
3. Adjust the tractor hitch and attach the spreader to the tractor as described in the following sections.
4. Connect PTO from spreader to the tractor as described in the following sections.
5. Connect hydraulic hoses which operate augers from the spreader to a double acting valve on the tractor.
6. Connect hydraulic hoses which control rear gates from the spreader to a double acting valve on the tractor.
7. Connect electric auger speed control box to tractor power source, attach to a convenient place on the tractor.
8. Lubricate the machine completely and check the oil level of both gearboxes.
9. Before loading spreader, run machine for several minutes to make sure that the spreader is lubricated and operating properly.

## TRACTOR HITCH

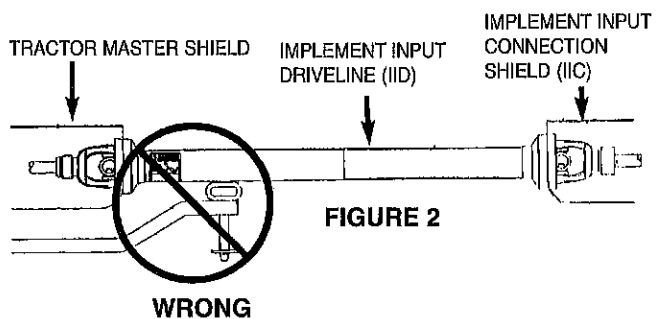
The hitch of the spreader is designed for a standardized tractor hitch. Adjust the drawbar so that it is 13 to 17 inches above the ground. Extend or shorten it so that the horizontal distance from the end of the tractor power take-off shaft to the center of the hitch pin hole is 14 inches, as shown in drawing. Use an adapter plate, if necessary, to secure the proper distance. An improperly located hitch point may cause damage to the universal joints of the power takeoff. Secure the drawbar so that the hitch pin hole is directly below the power drive line.



*If this implement is attached to a tractor with a clevis hitch (hammer-strap) style drawbar, the hammer-strap must be removed to prevent damage to the IID guarding and the IID telescoping members. [See Figure 1]*



*If this implement is attached to a tractor with an offset in the drawbar, be certain it is in the down position to prevent damage to the IID guarding and the IID telescoping members. [See Figure 2]*



# OPERATION *(Continued)*

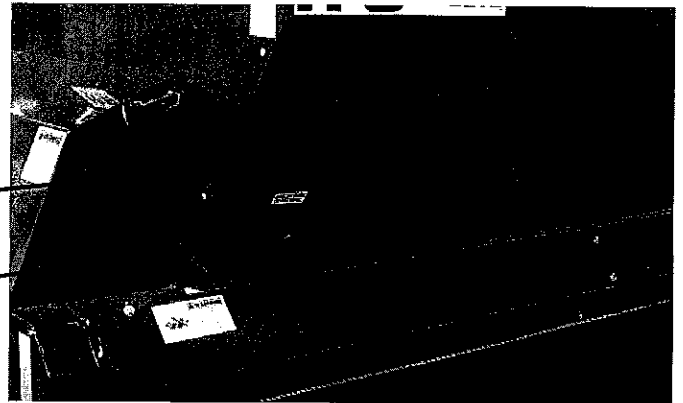
## ATTACHING TO THE TRACTOR

1. Fasten the spreader hitch to the drawbar with a **hitch pin that cannot bounce out**. Use 1" diameter hitch pin to pull spreader.
2. Remove the weight from the jack (jack is not to be used when spreader is loaded). Remove jack from pipe mount and place on convenient storage mount located on the left side of the spreader near front of spreader. This allows protection of jack from tractor tires during turns.
3. Slide spring loaded locking collar on PTO yoke rearward, and slide yoke onto the tractor PTO shaft. Release spring loaded collar. Be sure the pins fall into the groove of the tractor PTO shaft and collar snaps forward into locking position. **CAUTION:** Do not use a steel hammer to aid in joining PTO parts.

Be certain to disconnect all sources of power before servicing. Keep pant cuffs and other loose clothing away from all chain and gear drives as well as the other moving parts. Keep off the equipment when in use, and keep all safety shields in place. Do not attempt to clean, grease or lubricate while the machine is running. Never allow riders in or on the machine.

**NOTE: Lift jack should not be used to support spreader during loading procedures.**

SCRAPER STORAGE  
JACK STORAGE POSITION



## LOADING THE SPREADER

Although your spreader is designed and built to handle a wide range of manures, many potential problems can be avoided when manure is spread if the following guidelines are established and met.

**NOTE: TO PREVENT DAMAGE TO AUGERS, BEATERS AND DRIVELINE, FOREIGN OBJECTS (STONES, HEAVY TIMBER, METAL, OR LARGE FROZEN CHUNKS OF MANURE) SHOULD NEVER BE PUT INTO THE SPREADER.**

1. Before operation, especially in winter or freezing temperatures, make sure the augers and beaters are free to rotate, and the rear gate moves freely up and down.
2. Be sure rear gate and clean out door are closed before loading.
3. When loading pen-packed manure into the spreader with a loader bucket, shake the bucket to break up large chunks of manure. Material will spread more easily and efficiently.
4. Never excessively heap pen-packed or hard manure onto the spreader completely from front to rear.
5. Liquid manure or manure that flows will self-level allowing spreader to be filled to the top.

## **OPERATION (Continued)**

### **UNLOADING AND SPREADING**

To spread a wide variety of manure types and prevent unnecessary stress on the driveline components, observe the following guidelines for each type of manure.

#### **Liquid or Semi-Solid Manure (self-leveling).**

1. Engage tractor PTO at as low an RPM as possible. Slowly throttle tractor up to bring PTO up to 540 RPM.
2. Select desired ground speed and open discharge gate slowly to begin spreading.
3. Engage tractor hydraulics to operate augers.
4. To attain the desired coverage, adjust height of rear gate, speed of augers, and/or ground speed.

#### **DRY, PEN-PACKED, OR MANURE CONTAINING LONG STRAW OR HAY.**

1. Engage tractor PTO at as low an RPM as possible. Slowly throttle tractor up to bring PTO up to 540 RPM.
2. Select desired ground speed and open rear gate **completely** to begin spreading.
3. Engage appropriate lever of tractor hydraulics to operate augers. Begin unloading with augers at slow speed.
4. To achieve the desired coverage, adjust the speed of main augers and/or ground speed.

**NOTE: IF IT BECOMES NECESSARY TO REVERSE AUGERS, ENGAGE TRACTOR HYDRAULICS SLOWLY.**

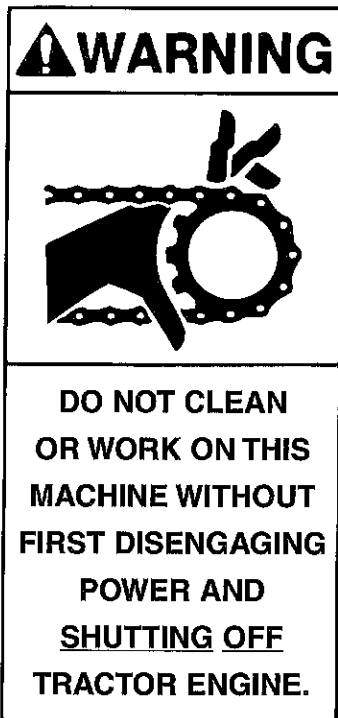
### **OPERATION IN FREEZING WEATHER**

1. Always allow spreader to empty completely.
2. Disengage tractor PTO and hydraulics.
3. Shut off tractor and remove ignition key.
4. Allow all movement to stop before attempting to clean spreader.
5. Scrape any remaining manure from inside and rear of spreader. Clean all manure from rear pan, end of auger housings, and beaters.
6. Operate main augers to clean any remaining manure from inside spreader.
7. Run rear gate up and down to sufficiently clean gate track.
8. After following steps 3, 4 and 5, again check rear pan and beater area to be sure it is clean of all manure.
9. After hauling liquid or semi solid manure, place a small amount of straw in each auger housing at the front of the spreader and operate spreader. This will wipe out excess liquid and help prevent freeze up of spreader.
10. Close clean out door at rear of spreader.
11. Park spreader with rear gate approximately halfway open.

**NOTE: BEFORE LOADING SPREADER NEXT TIME, BE SURE AUGERS AND BEATERS ARE FREE TO ROTATE AND REAR DISCHARGE GATE MOVES FREELY UP AND DOWN.**

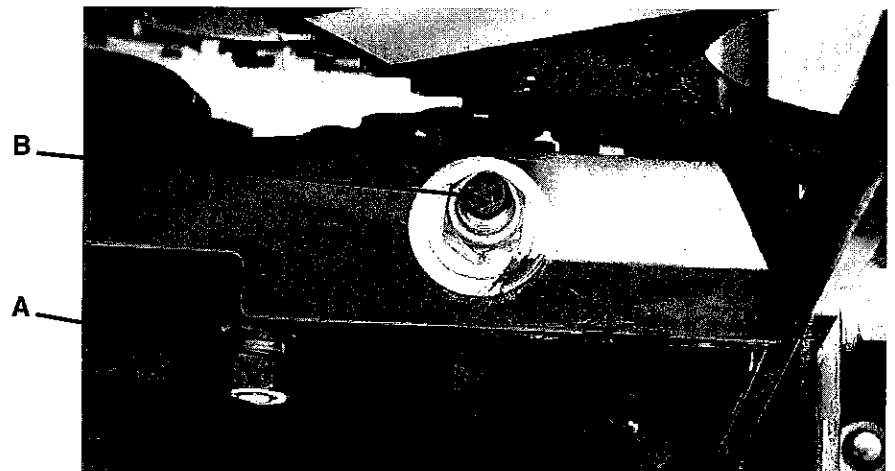
# ADJUSTMENTS

**FAILURE TO FOLLOW THE RECOMMENDED ADJUSTMENTS WILL VOID WARRANTY**



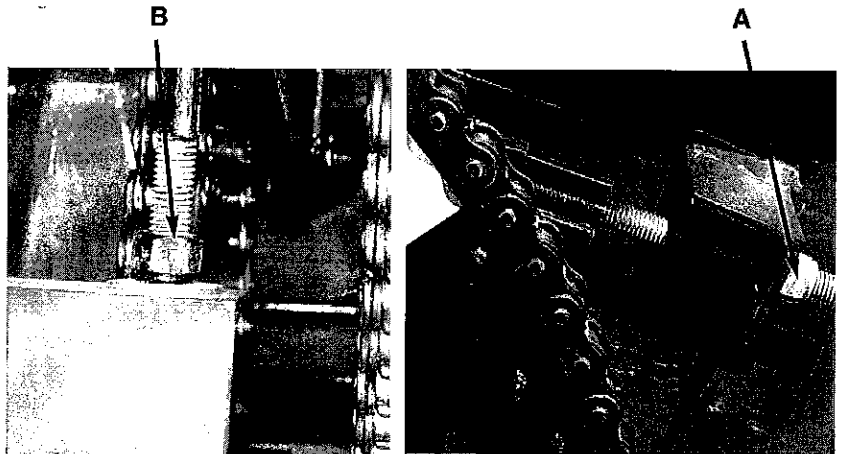
## AUGER DRIVE PRIMARY DRIVE CHAIN #60

Check adjustment on primary drive chain after first 5-6 loads. (This should allow for a sufficient wear-in period). Adjust chain by loosening nut (A). Then tighten nut (B) until there is 1/8" deflection at center of chain. Retighten nut (A). Check adjustment periodically to insure proper tension at all times. Overtightening or too loose of a chain will result in excessive wear on chain and sprockets.



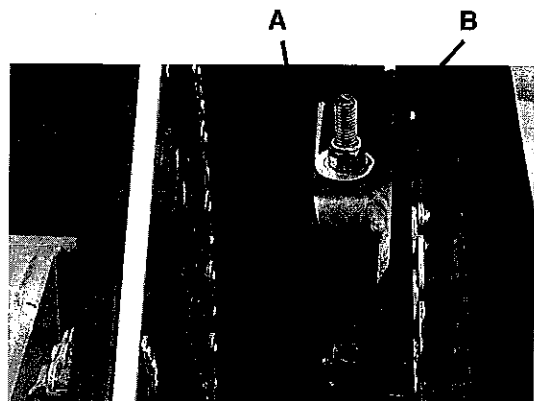
## FINAL DRIVE CHAINS #80 (#100 on Model 3306)

Periodically check adjustment on final auger drive chains. Left and right hand augers each have their own tighteners. To tighten right hand drive chain, turn out (A) clockwise until there is 1/8" to 1/4" deflection at center of chain. Left hand auger drive chain is adjusted by turning nut (B) on tightener bolt clockwise until desired tension is reached.



## SIDE SHAFT DRIVE CHAIN #80

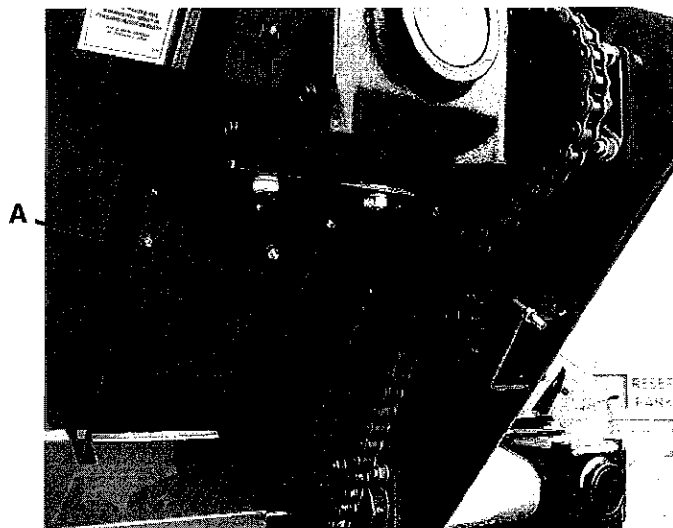
Check adjustment of side shaft drive chain after first 5-6 loads. (This should allow for sufficient wear-in period). To adjust front drive chain, loosen bolt A. Tighten nut B until there is 1/2" deflection at center of chain. Retighten bolt A. Check adjustment periodically to insure proper adjustment at all times. Overtightening or too loose of a chain will result in excessive wear on the bearings, chain, and sprockets.



**NOTE: Periodically lubricate roller chains with a light machine oil.**

## INTERNAL BEATER DRIVE CHAIN #80

To adjust internal beater drive chain, slightly loosen bolt A. Using a hammer and a blunt punch, slide sprocket and bolt in adjustment slot against roller chain. There should be 1/4" deflection at center of chain for proper adjustment. Retighten bolt A. Periodically check adjustment to insure proper tension at all times.



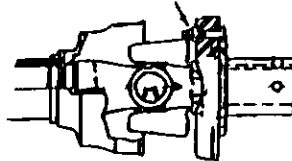
## **! DANGER**



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.

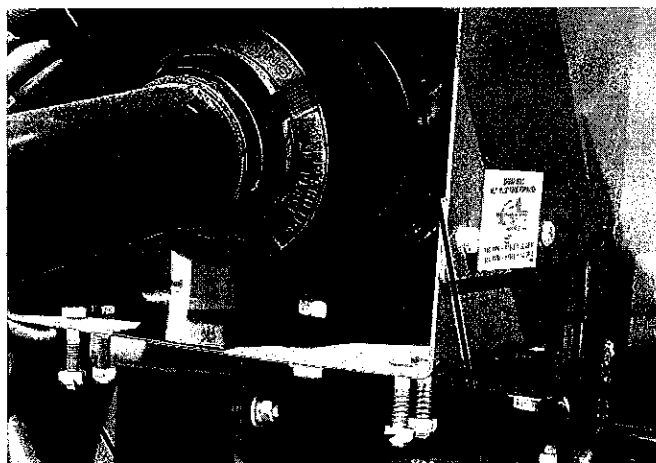
### SHEAR BOLT NUT MUST FACE FORWARD



540 RPM = 5/16 x 1-1/2 GR 8  
1000 RPM = 5/16 x 1-1/2 GR 2

### SHEAR BOLTS

Both beaters at the rear of the spreader are protected by one shear bolt located in the PTO at the front of the spreader. Four spare shear bolts are provided. Shearing of shear bolt is normally due to large frozen chunks of manure, foreign objects (rocks, chunks of wood, etc.) in the manure, running augers too fast when unloading long straw and pen-packed material, or STARTING THE SPREADER PTO TOO QUICKLY WITH HIGH TRACTOR RPM'S. Always determine the reason for shearing bolt and eliminate problem before replacing shear bolt. Always use proper shear bolt (5/16-18 x 1-1/2" GR.8) for replacement when spreader is being operated at 540 RPM. Use shear bolt (5/16-18 x 1-1/2" GR.2) when spreader is being operated at 1000 RPM.



SPARE SHEAR BOLTS

SHEAR BOLT



## ALL PURPOSE SPREADER, CLEAN OUT DOOR

The clean out door hydraulic cylinder is equipped with a shut off valve. This valve allows the user to lock the clean out door in the open or closed position for flexible operation.

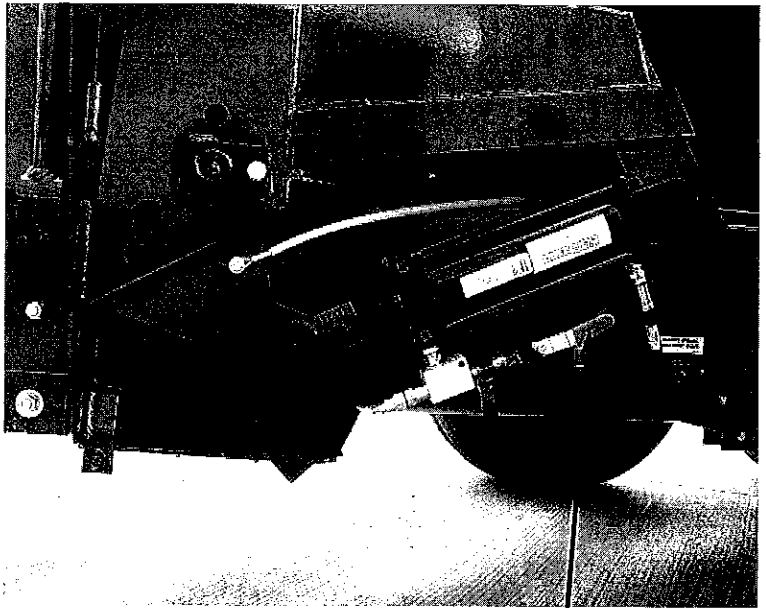
### VALVE OPEN POSITION

During normal operation, the valve is open. When the rear gate is to be opened, the clean out door will close first. When closing the rear gate, the clean out door will open first.

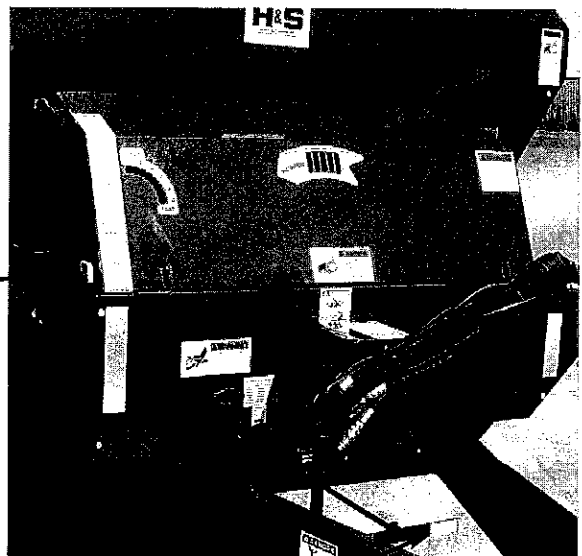
### VALVE CLOSED POSITION

For liquid manure hauling, close the valve when the clean out door is closed. The clean out door will remain closed when the rear gate is operated.

For grain hauling, close the valve when the clean out door is open. The clean out door will remain open when the rear gate is operated.



SHUT OFF VALVE



REAR DOOR INDICATOR

CLEAN OUT DOOR INDICATOR



## **!** DANGER

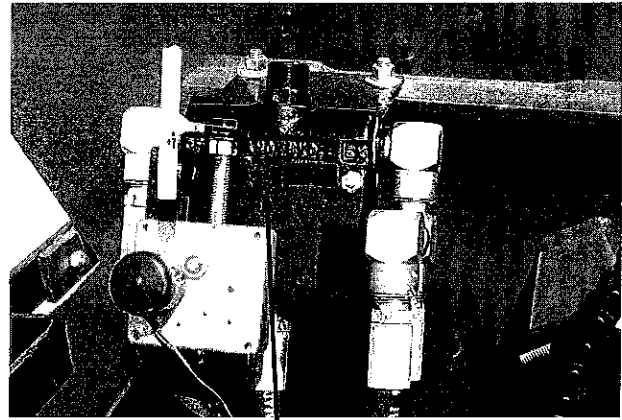
STAY CLEAR OF BEATER IF  
TRACTOR OR PTO IS RUNNING  
BEATER SHUT OFF COULD  
ACCIDENTALLY BE ENGAGED  
FAILURE TO HEED THIS  
WARNING MAY RESULT IN  
PERSONAL INJURY OR DEATH  
KEEP CLOTHING, YOURSELF  
AND OTHERS WELL CLEAR



**! 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.



**SPEED CONTROL VALVE**

**AUGERS**

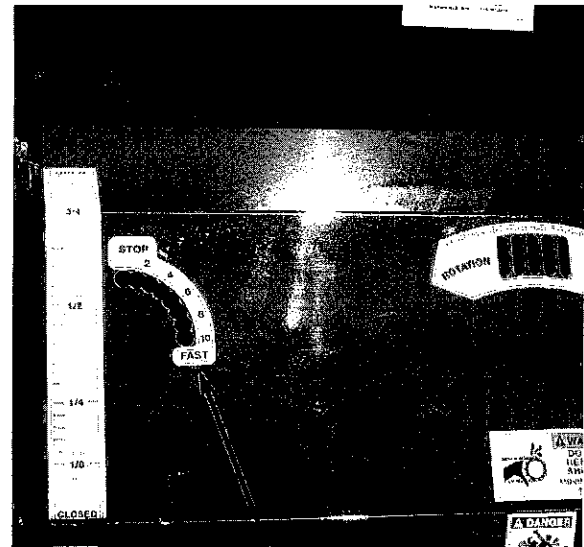
The main augers are hydraulically driven to offer a wide range of unloading speeds. Auger speed is controlled by utilizing the cab-mounted electric control. By moving the indicator from slower to faster as marked, the auger speed can be varied from zero to 13 RPM, depending on the tractor hydraulic system. A tractor hydraulic system with 16 gallons per minute flow, and 2200 pounds per inch pressure, will operate the spreader at maximum speed and performance. A system with less pressure will operate spreader efficiently, depending on type of material and the weight of the load. The auger driven mechanism is protected by a preset relief valve. Overriding relief valve is caused by too heavy of a load, feeding long material into the beaters too fast, or foreign object lodged in augers.



**ELECTRIC AUGER SPEED CONTROL**



**NOTE:** In some photographs within this operators manual, the shields have been removed or opened for clarification purposes only. **NEVER OPERATE SPREADER WITH GUARDS OR SHIELDS REMOVED.**



**AUGER SPEED INDICATOR**

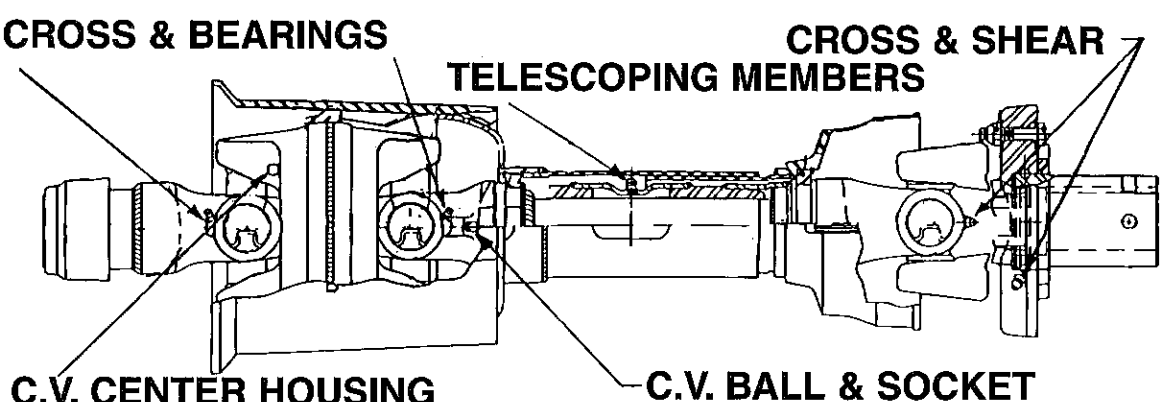
**ADJUSTING WHEEL HUBS**

To adjust wheel hubs, tighten the castellated nut on the spindle to the point where there is no end-play and a slight drag on the bearings. Replace the cotter key with a new one of the correct size.

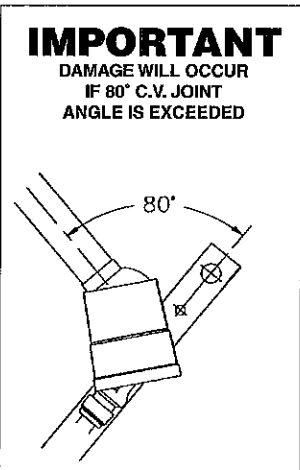
# LUBRICATION GUIDE

**PTO ASSEMBLY** – Care must be taken to keep the male and female driving elements well lubricated and free sliding. Failure to observe this precaution will result in excessive pressure being required to collapse or extend the assembly while subject to operating torque. This excessive force may damage or displace the jackshaft bearings. **DO NOT** lubricate the shield surfaces. The shield surfaces must be kept dry, as dirt accumulation on them will quickly cause these units to bind and not rotate. Care should also be taken to be certain that the rotating integral shields are not dented or damaged, as this also will result in excessive force being applied against the jackshaft. Damaged shields also cause obvious difficulties when installing the assembly. If at any time the shields do not turn freely, they should be checked to determine the cause, and repaired or cleaned. To avoid damage to the main drive bearings, avoid turning sharp corners while PTO is running. Start and Stop PTO slowly to avoid damage to the drive train.

## LUBRICATION REQUIREMENTS



| <u>INTERVAL</u> | <u>LOCATION</u>     | <u>AMOUNT</u> |
|-----------------|---------------------|---------------|
| 8 HRS.*         | CROSS & BEARINGS    | 1-PUMP        |
| 8 HRS.          | TELESCOPING MEMBERS | 4-8 PUMPS     |
| 8 HRS.          | C.V. BALL & SOCKET  | 1-2 PUMPS     |
| 24 HRS.         | C.V. CENTER HOUSING | 4-PUMPS       |



Lubricate all fittings with a good quality lithium based grease such as “Shell Super Duty”, “Mobilith AW2”, “Chevron Ultra Duty II” or equivalent. These greases meet N.L.G.I. #2 specifications and contain 1% Molybdenum Disulfide or less.

\* Constant angle applications must have a lube interval of 4 hours.

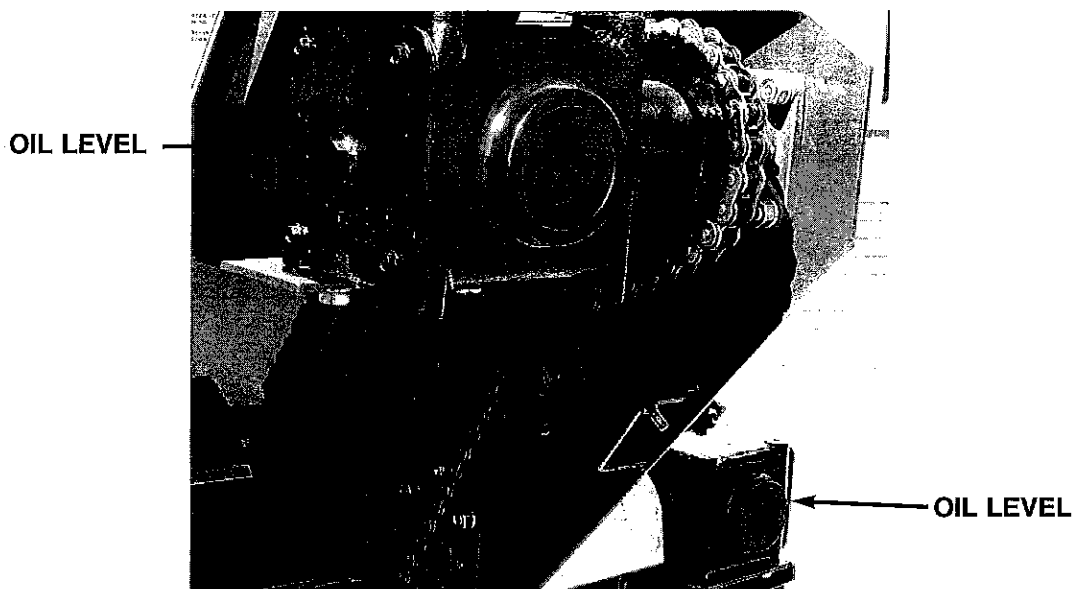
## LUBRICATION GUIDE (Continued)

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



**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.

**GEARBOX** – Before using your new spreader, check the oil level in the two beater drive gearboxes. Oil level should be at the center of the shafts in both gearboxes. Use 80W90 gear lube



### GREASE FITTINGS

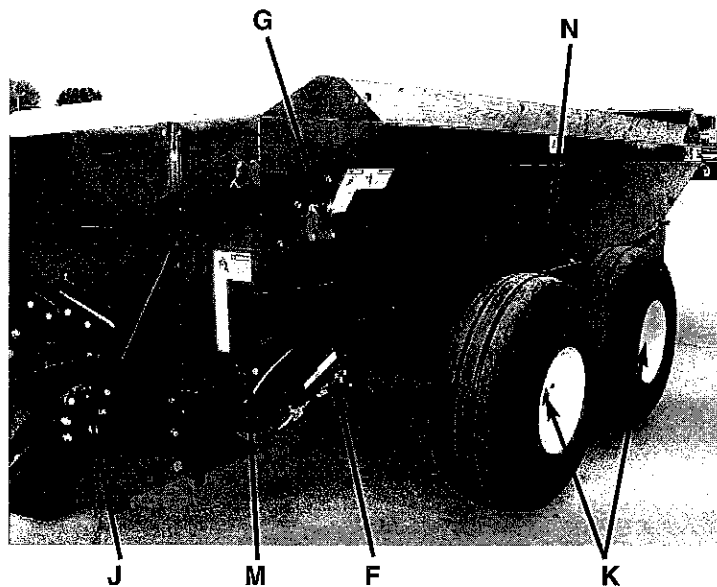
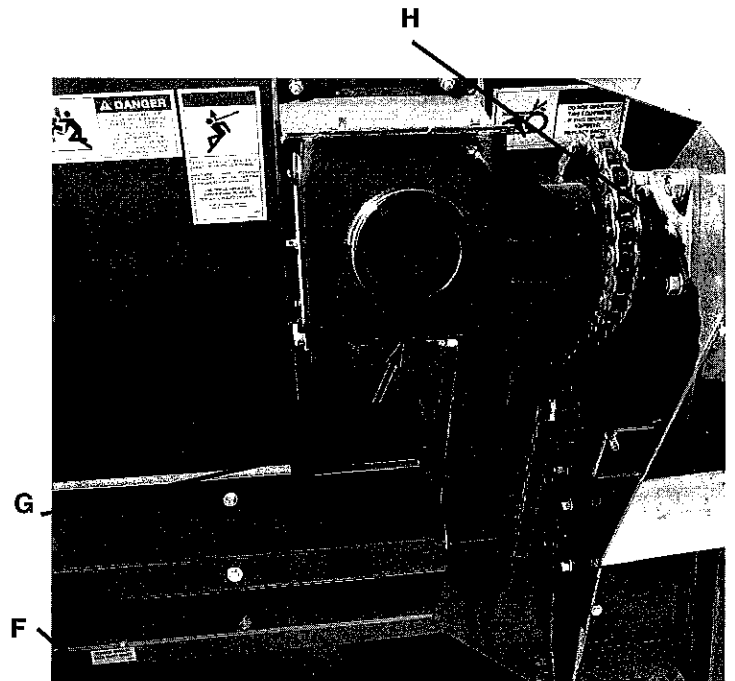
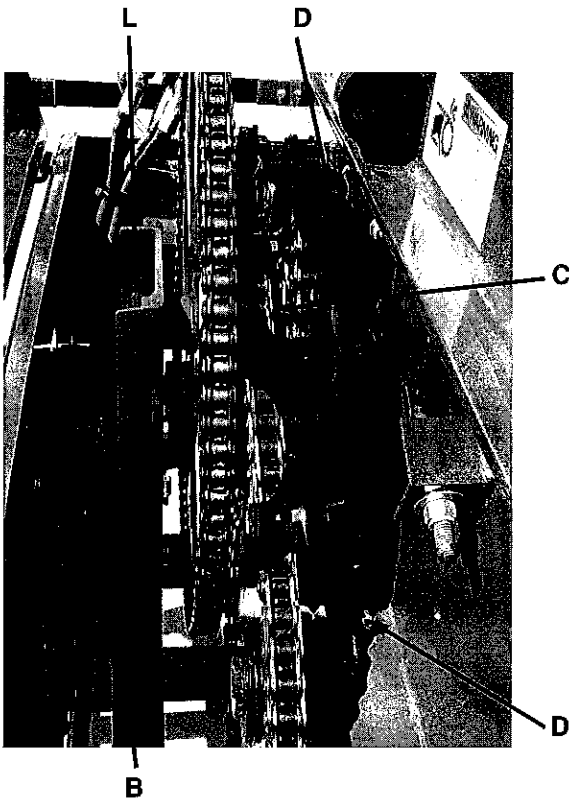
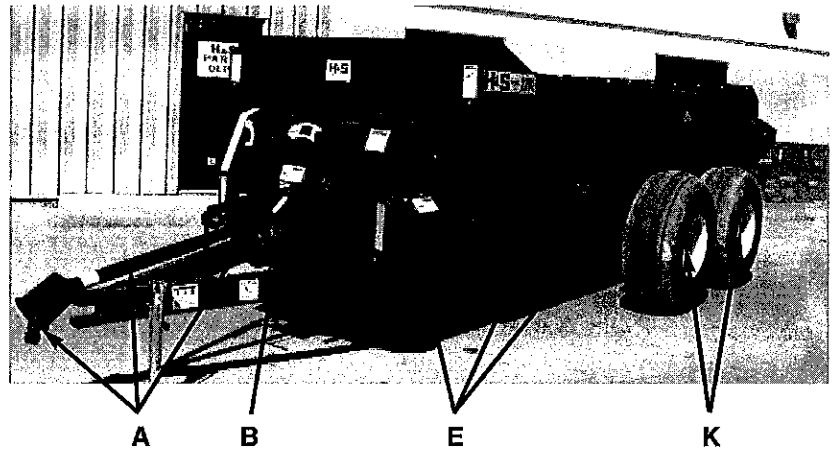
There are numerous grease fittings your new spreader. If these are lubricated properly and often enough, it will prolong the life of the spreader. (Grease every 20 hours, also before storage and after power washing.) Unusual or severe conditions may require more frequent lubrication. Make certain that the grease fittings are free of paint and dirt, force a high-quality grease into them until the grease comes out around the shaft on the sleeve-type bearings. On 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 the accumulation of chaff and grit around the bearings.

### GREASE ZERK LOCATION

Listed below and shown on the following page are the description and location of the grease fittings.

- A. (7) PTO - On each end at U-Joints, one on sliding tube. (See Lubrication Drawing, Page 17).
- B. (2) Front jack shaft (pillow block bearings).
- C. (1) Idler sprocket (right hand auger drive).
- D. (2) One on front of each auger.
- E. (4) Side shaft on left hand side of spreader.
- F. (2) One on each tandem axle pivot tube (remote zerk).
- G. (2) One on each end of internal beater.
- H. (1) Internal beater gearbox input shaft support.
- J. (1) Rear beater right hand support bearing.
- K. (4) One each on road wheel hub (tandem) (2) if single axle.
- L. (1) Main drive gear bearing.
- M. (1) Rear door hinge.
- N. (2) One on each side, tandem walking beam

SHIELDS REMOVED FOR CLARITY.  
DO NOT OPERATE WITH SHIELDS  
OPEN OR REMOVED.



## DECAL LOCATION

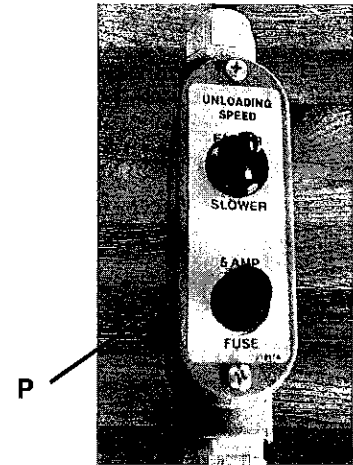
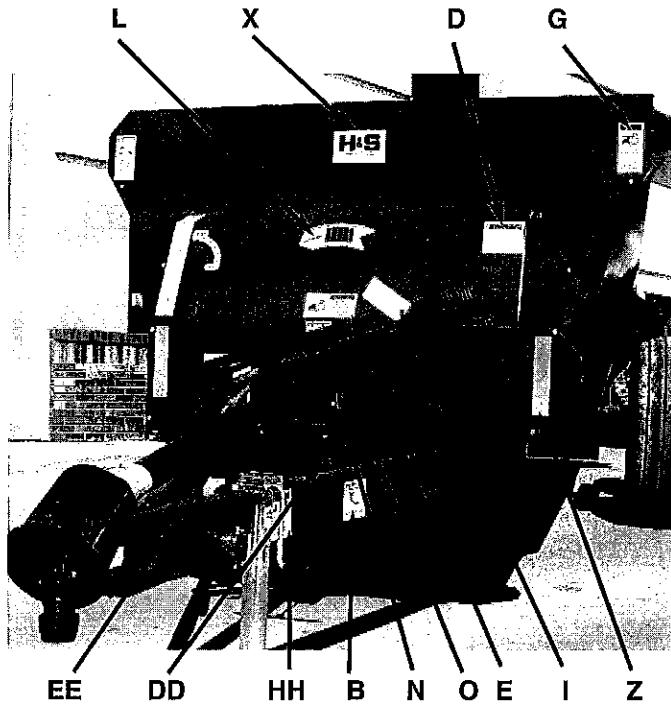
Your H&S All Purpose Manure Spreader was manufactured with operator safety in mind. Located on the manure spreader are various decals to aid in operation, and warn of danger or caution areas. Pay close attention to all the decals on your Manure Spreader.



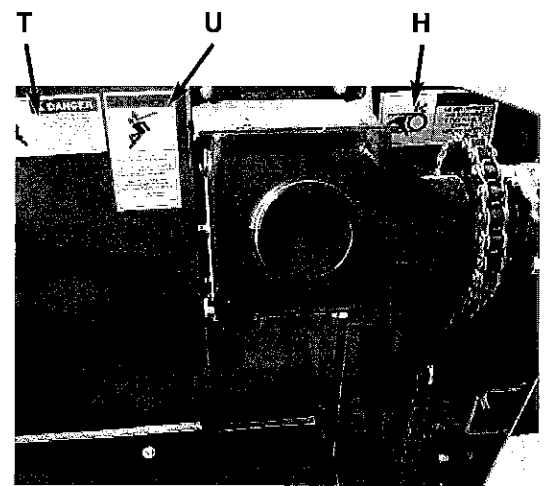
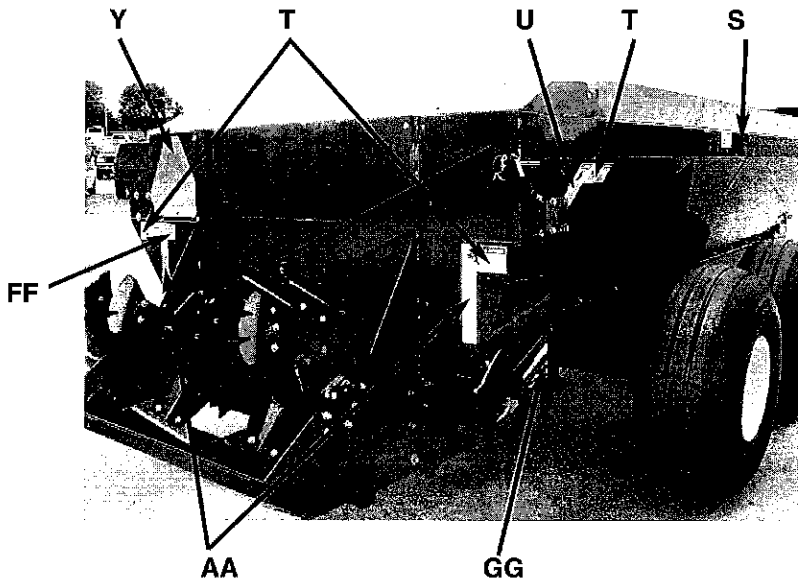
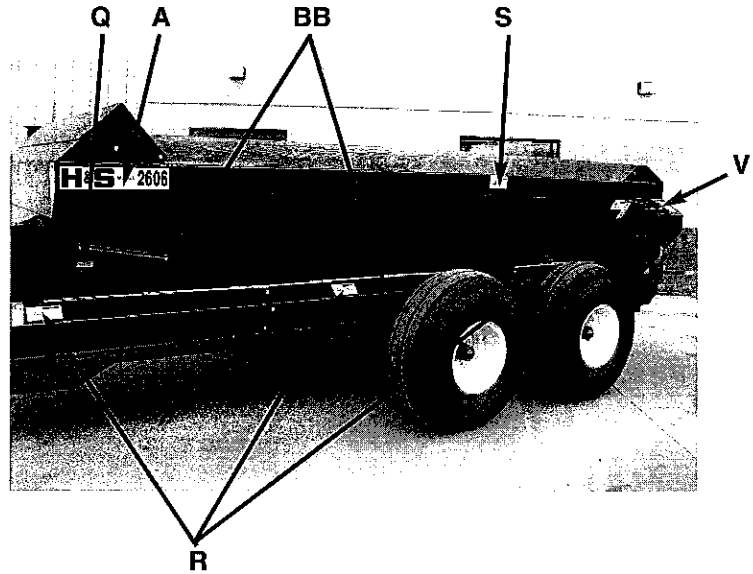
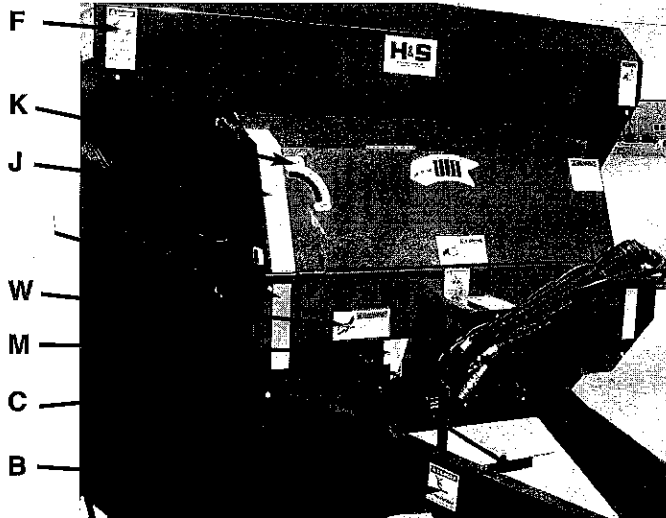
**DO NOT REMOVE ANY OF THESE DECALS. IF DECALS ARE LOST, DAMAGED, OR IF MANURE SPREADER IS REPAINTED, REPLACE DECALS. REMEMBER: DECALS ARE FOR YOUR PROTECTION AND INFORMATION.**

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

| ITEM            | PART NO.  | DESCRIPTION                                   |
|-----------------|-----------|---|
| A               | 81605A    | (2) Model 1506                                |
|                 | 81605B    | (2) Model 1806                                |
|                 | 81605C    | (2) Model 2206                                |
|                 | 81605E    | (2) Model 2606                                |
|                 | 81605D    | (2) Model 3306                                |
| AA              |           | (2) Red Reflector                             |
| B               | 9194A     | (3) Danger - No Step                          |
| BB              | 71494A    | (3) Warning - Do Not Operate                  |
| C               |           | FEMA Decal                                    |
| CC              | Weasler   | Danger - Rotating Driveline (H&S Decal 1494L) |
| D               | 72203     | Warning - Help Avoid Injuries                 |
| DD              |           | Serial -Model Number                          |
| E               | 1494B     | Warning - Do Not Remove Shields               |
| EE              | 102196    | PTO Lube                                      |
| F               | 9194B     | Danger - Never Allow Riders                   |
| FF              | 71188F    | Attention: Long Straw                         |
| G               | 1494J     | (2) Warning - Do Not Clean or Work            |
| GG              | 3494A     | (2) Remote Grease                             |
| H               | 1494A     | (2) Warning - Do Not Operate                  |
| HH              | 82602     | Warning - Crushing Hazard                     |
| I               | 11793     | Attention: Tractor Half PTO                   |
| J               | 7896C     | Rear Door Indicator                           |
| K               | 7896A     | Auger Speed Indicator                         |
| L               | 7896D     | Direction of Travel Indicator                 |
| M               | H&S       | Patent Number                                 |
| N               | 7896B     | Shear Bolt Instructions                       |
| O               | 5896B     | Danger - Rotating Driveline                   |
| P               | 21897A    | Electric Control Box Decal                    |
| Q               | 71188B    | Jack Storage Position                         |
| R               | 12794     | (3) Warning - Do Not Remove Shields           |
| S               | 111593B   | (2) Danger - Keep Out                         |
| T               | 111593A   | (4) Danger - Stay Clear of Beater             |
| U               | 9894      | (2) Danger - Stay Clear of Beater             |
| V               | 1494K     | Warning - Do Not Remove Shields               |
| W               | 11599     | Warning - Do Not Go Near Leaks                |
| X               | B8        | H&S Decal (5x8)                               |
| Y               |           | SMV Decal                                     |
| Z               |           | (2) Amber Reflector                           |
|                 | 1506-9805 | Complete Set of Decals - Model 1506           |
|                 | 1806-9805 | Complete Set of Decals - Model 1806           |
|                 | 2206-9805 | Complete Set of Decals - Model 2206           |
|                 | 2606-9805 | Complete Set of Decals - Model 2606           |
|                 | 3306-9805 | Complete Set of Decals - Model 3306           |
| Paint - H&S Red |           |   |
|                 | ZX21      | Gallon  |
|                 | ZX22      | Quart   |
|                 | ZX23      | Pint  |



(UNDER SHIELD)



(SHIELDS REMOVED FOR CLARITY)

## 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 frame below the PTO shaft.
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. INC.</b> |                      |
| MARSHFIELD, WIS.             |                      |
| MOD. NO.                     | <input type="text"/> |
| SER. NO.                     | <input type="text"/> |
| DESCR.                       | <input type="text"/> |

PLEASE RECORD NUMBERS FOR YOUR UNIT FOR QUICK REFERENCE

### ABOUT IMPROVEMENTS

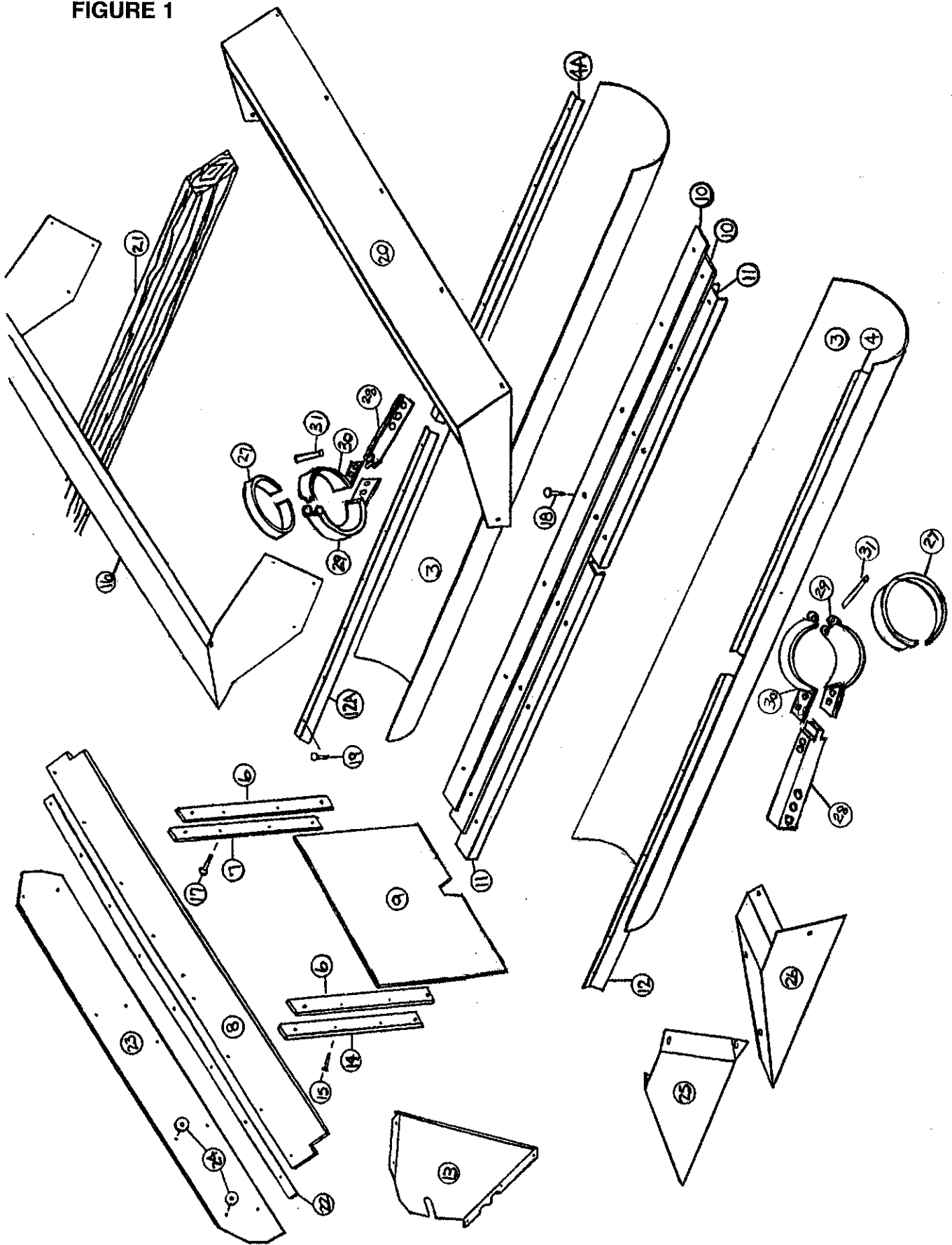
H&S IS CONTINUALLY STRIVING TO IMPROVE ITS' PRODUCTS.

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  
BOX AND COMPONENT PARTS**

| ITEM | SPREADER SIZES |         |         |         |        | DESCRIPTION                   |
|------|----------------|---------|---------|---------|--------|-------------------------------|
|      | 1506           | 1806    | 2206    | 2606    | 3306   |                               |
| 3.   | 12SV4          | 16SV6   | "       | "       | 33SV4  | Auger Housing Poly            |
| 4.   | 12SV5          | 16SV7   | "       | "       | 33SV5  | Auger Wiper RH Front          |
| 4A.  | 12SV5A         | 16SV7A  | "       | "       | 33SV5A | Auger Wiper LH Front          |
| 6.   | 16SV9          | "       | "       | "       | "      | Door Guide Poly               |
| 7.   | 16SV10         | "       | "       | "       | "      | LH Door Guide                 |
| 8.   | 12SV29         | "       | 16SV11  | "       | -      | Rubber Splash                 |
| 9.   | 16SV12         | "       | "       | "       | "      | Door                          |
| 10.  | 12SV6          | 16SV13  | "       | "       | 33SV6  | Center Wipers                 |
| 11.  | 12SV7          | 16SV14  | "       | "       | 33SV7  | Auger Poly Hold Down          |
| 12.  | 12SV8          | 16SV15  | "       | "       | 33SV5A | Auger Wiper RH Back           |
| 12A. | 12SV8A         | 16SV15A | "       | "       | 33SV5  | Auger Wiper LH Back           |
| 13.  | 12SV44         | 16SV265 | 16SV263 | "       | 33SV87 | RH Corner Filler              |
| *    | 12SV45         | 16SV266 | 16SV264 | "       | 33SV88 | LH Corner Filler              |
| 14.  | 16SV18         | "       | "       | "       | "      | RH Door Guide                 |
| 15.  | 16SV19         | "       | "       | "       | "      | CTR. Sunk Bolt 1/2" x 2"      |
| 16.  | -              | -       | -       | -       | 33SV13 | Back Splash Extension         |
| 17.  | 23N194         | "       | "       | "       | "      | 1/2" x 2" Bolt GR.5           |
| 18.  | 16SV21         | "       | "       | "       | "      | 3/8" x 1-1/2" Carr. Bolt GR.5 |
| 19.  | BFR247         | "       | "       | "       | "      | 3/8" x 1" Carr. Bolt GR.5     |
| 20.  | 16SV216        | -       | -       | 16SV216 | 33SV10 | Front Splash                  |
| 21.  | -              | -       | -       | 16SV217 | -      | Wood Rails                    |
| *    | 12SV46         | -       | -       | -       | 33SV11 | Wood Rail LH                  |
| *    | 12SV47         | -       | -       | -       | 33SV12 | Wood Rail RH                  |
| 22.  | 12SV30         | "       | 16SV220 | "       | -      | Strap                         |
| 23.  | 12SV31         | "       | -       | -       | -      | Back Splash Poly              |
| 24.  | 12SV32         | "       | -       | -       | -      | Back Splash Poly Washer       |
| 25.  | -              | 12SV40  | -       | -       | -      | Back Splash Gusset RH         |
| *    | -              | 12SV42  | -       | -       | -      | Back Splash Gusset LH         |
| 26.  | 12SV41         | -       | -       | -       | -      | Back Splash Gusset RH         |
| *    | 12SV43         | -       | -       | -       | -      | Back Splash Gusset LH         |
| 27.  | 16SV404        | "       | "       | "       | "      | Poly Bearing                  |
| 28.  | 16SV405        | "       | "       | "       | "      | Auger Bearing Post            |
| 29.  | 16SV406        | "       | "       | "       | "      | Auger Bearing Cap A           |
| 30.  | 16SV407        | "       | "       | "       | "      | Auger Bearing Cap B           |
| 31.  | 16SV408        | "       | "       | "       | "      | Pin                           |
| *    | 16SV409        | "       | "       | "       | "      | Shim (as needed)              |

**NOT SHOWN:**

**OPTIONAL HIGH SPLASHES**

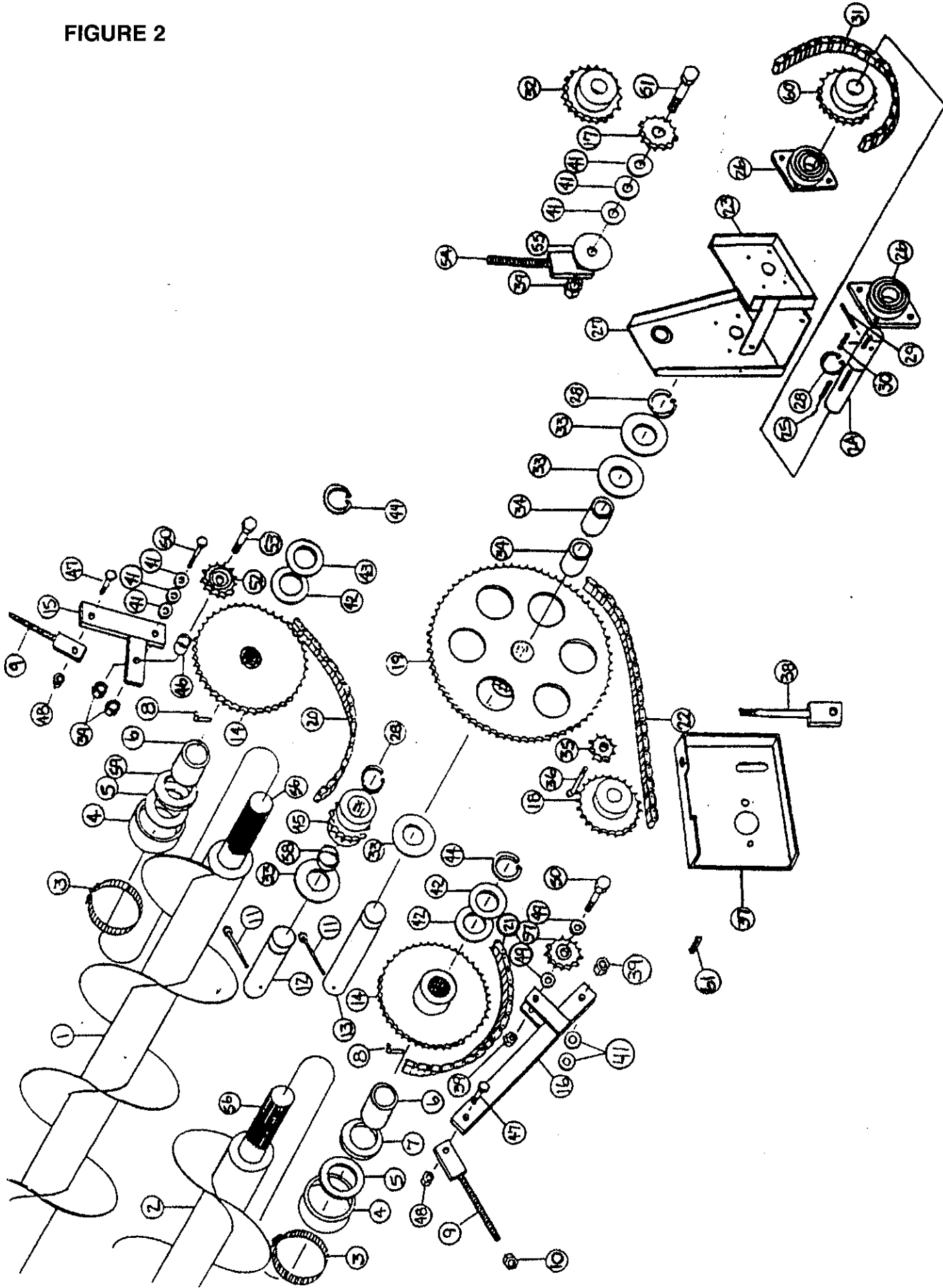
|   |         |         |         |   |                            |
|---|---------|---------|---------|---|----------------------------|
| - | 16SV359 | 16SV361 | 16SV360 | - | High-Back Splash Extension |
| - | 16SV369 | 16SV362 | 16SV363 | - | Hi-Front Splash Extension  |

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

" (Means Same as Preceding Number)

- ( Means Not Used on This Model)

FIGURE 2

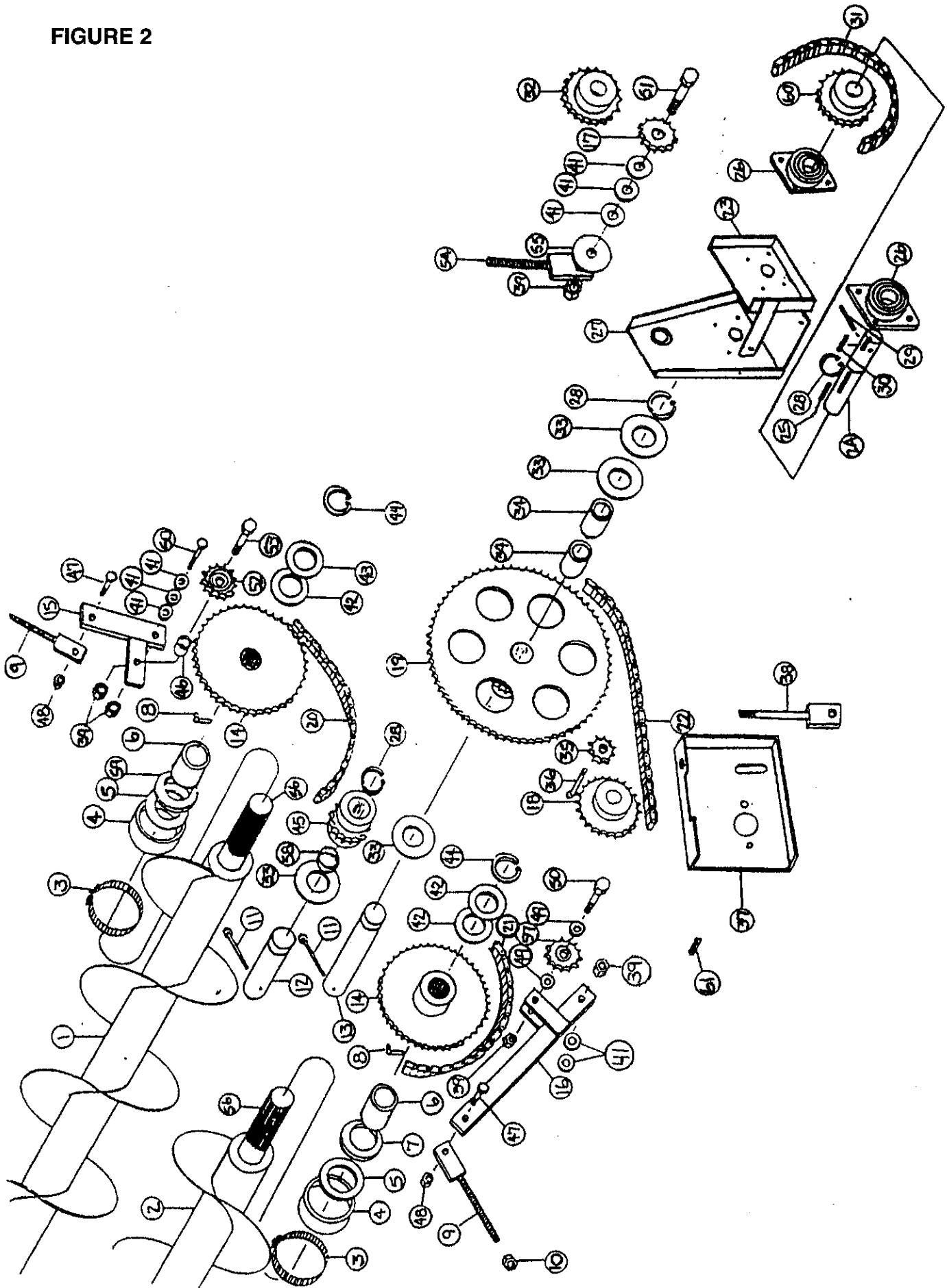


**FIGURE 2  
AUGERS AND DRIVE ASSEMBLY**

| ITEM | SPREADER SIZES |          |          |          |         | DESCRIPTION                               |
|------|----------------|----------|----------|----------|---------|---|
|      | 1506           | 1806     | 2206     | 2606     | 3306    |   |
| 1.   | 12SV53         | 16SV401  | "        | "        | 33SV108 | LH Auger                                  |
| 2.   | 12SV54         | 16SV402  | "        | "        | 33SV109 | RH Auger                                  |
| 3.   | 12V70          | "        | "        | "        | "       | Clamp                                     |
| 4.   | 16SV24         | "        | "        | "        | "       | Outer Seal                                |
| 5.   | 16SV25         | "        | "        | "        | -       | Inner Seal                                |
| *    | -              | -        | -        | -        | 33SV16  | RH Spacer                                 |
| *    | -              | -        | -        | -        | 12V74   | LH Spacer                                 |
| 6.   | 12V73          | "        | "        | "        | "       | Bronze Bushing                            |
| 7.   | 12V72          | "        | "        | "        | 33SV17  | Bronze Thrust Washer                      |
| 8.   | 16SV26         | "        | "        | "        | "       | Pipe Grease Zerk                          |
| 9.   | 12V78          | "        | "        | "        | "       | Tightener Bracket                         |
| 10.  | R29            | "        | "        | "        | "       | 1/2" Nut                                  |
| 11.  | 23N1           | "        | "        | "        | "       | Bolt 5/16" x 5" GR.5                      |
| 12.  | 16SV27         | "        | "        | "        | 33SV18  | Idler Shaft                               |
| 13.  | 16SV28         | "        | "        | "        | 33SV19  | Primary Shaft                             |
| 14.  | 12V81          | "        | "        | "        | -       | 45T Sprocket                              |
| *    | -              | -        | -        | -        | 33SV20  | 35T Sprocket                              |
| 15.  | 16SV30         | "        | "        | "        | 33SV22  | LH Tightener                              |
| 16.  | 16SV29         | "        | "        | "        | 33SV21  | RH Tightener                              |
| 17.  | 12V77          | "        | "        | "        | "       | 12T Idler Sprocket                        |
| 18.  | 12SV11         | "        | 16SV31   | "        | "       | 16T Sprocket                              |
| 19.  | 16SV32         | "        | "        | "        | 33SV23  | 98T Main Drive Sprocket                   |
| 20.  | 16SV33         | "        | "        | "        | -       | LH Final Drive Chain #80 x 59 Pitch       |
| *    | -              | -        | -        | -        | 33SV24  | LH Final Drive Chain #100 x 46 Pitch      |
| 21.  | 16SV34         | "        | "        | "        | -       | RH Final Drive Chain #80 x 79 Pitch       |
| *    | -              | -        | -        | -        | 33SV25  | RH Final Drive Chain #100 x 62 Pitch      |
| 22.  | 16SV35         | "        | "        | "        | "       | Auger Primary Drive Chain #60 x 110 Pitch |
| 23.  | 16SV301        | "        | "        | "        | "       | Front Post                                |
| 24.  | 16SV302        | "        | "        | "        | "       | Input Shaft                               |
| 25.  | PB87           | "        | "        | "        | "       | 3/8" x 2" Sq. Key                         |
| 26.  | 12V67          | "        | "        | "        | "       | Bearing Assembly                          |
| 27.  | 16SV303        | "        | "        | "        | "       | Rear Input Post                           |
| 28.  | 12V62          | "        | "        | "        | "       | Snap Ring                                 |
| 29.  | 16SV379        | "        | "        | "        | "       | 3/8" x 2-1/2" Roll Pin                    |
| 30.  | S38            | "        | "        | "        | "       | 3/8" x 2-3/8" Sq. Key                     |
| 31.  | 16SV39         | "        | "        | "        | "       | Side Shaft Chain #80 x 75 Pitch           |
| *    | -              | -        | -        | -        | 33SV64  | Side Shaft Chain #80 x 73 Pitch           |
| 32.  | 12V104         | "        | "        | "        | -       | 20T Sprocket                              |
| *    | Optional       | Optional | Optional | Optional | 16SV213 | 23T Sprocket (1000 RPM)                   |

(Continued on Pages 28 & 29)

FIGURE 2



**FIGURE 2  
AUGERS AND DRIVE ASSEMBLY**

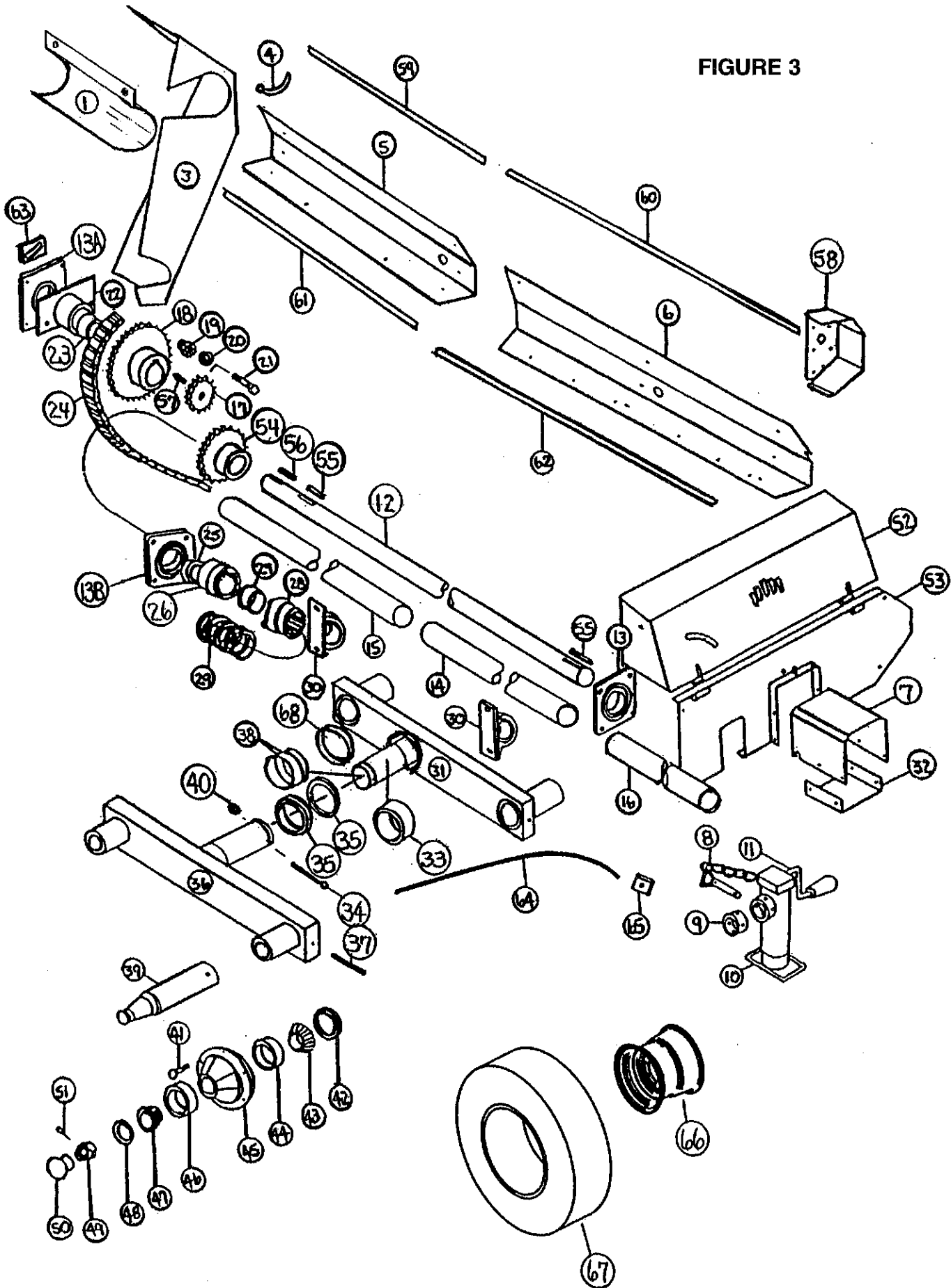
| ITEM | SPREADER SIZE |          |          |          |        | DESCRIPTION                             |
|------|---------------|----------|----------|----------|--------|---|
|      | 1506          | 1806     | 2206     | 2606     | 3306   |   |
| 33.  | 16SV40        | "        | "        | "        | "      | Shim                                    |
| 34.  | 16SV41        | "        | "        | "        | "      | Bronze Bushing 1-3/4"ODx1-1/2"IDx2-3/8" |
| 35.  | 12N42         | "        | "        | "        | "      | 15T Sprocket                            |
| 36.  | 16SV91        | "        | "        | "        | "      | Bolt 1/2" x 3-1/4" GR.5                 |
| 37.  | 16SV42        | "        | "        | "        | "      | Motor Mount                             |
| 38.  | 16SV43        | "        | "        | "        | "      | Tightener Bracket                       |
| 39.  | HE7           | "        | "        | "        | "      | 3/4" Nut                                |
| 41.  | T73           | "        | "        | "        | "      | Shim                                    |
| 42.  | 16SV45        | "        | "        | "        | "      | Shim 3/16"                              |
| 43.  | 16SV46        | "        | "        | "        | "      | Shim 1/4"                               |
| 44.  | B17F          | "        | "        | "        | "      | Snap Ring                               |
| 45.  | 16SV47        | "        | "        | "        | "      | 12T Idler Sprocket                      |
| *    | -             | -        | -        | -        | 33SV27 | 9T Idler Sprocket                       |
| 46.  | 16SV48        | "        | "        | "        | "      | Spacer                                  |
| 47.  | 12V45         | "        | "        | "        | "      | 1/2" x 1-1/2" Bolt GR.5                 |
| 48.  | 9S17          | "        | "        | "        | "      | 1/2" Lock Nut                           |
| 49.  | 16SV49        | "        | "        | "        | "      | Shim 1/16"                              |
| 50.  | HE8           | "        | "        | "        | "      | 3/4" x 2-1/4" Bolt GR.5                 |
| 51.  | 16SV50        | "        | "        | "        | "      | 3/4" x 2-1/2" Bolt GR.5                 |
| 52.  | 16SV328       | "        | "        | "        | -      | Reinforced 12T Idler Sprocket           |
| *    | -             | -        | -        | -        | 33SV1  | Reinforced 9T Idler Sprocket            |
| 53.  | 16SV202       | "        | "        | "        | "      | 3/4" x 3-3/4" Bolt GR.5                 |
| 54.  | 16SV204       | "        | "        | "        | "      | Tightener Mount                         |
| 55.  | 16SV211       | "        | "        | "        | "      | Spacer                                  |
| 56.  | 16SV222       | "        | "        | "        | 33SV86 | Splined Shaft w/Auger End               |
| 57.  | 12V77         | "        | "        | "        | -      | 12T Idler Sprocket                      |
| *    | -             | -        | -        | -        | 33SV30 | 9T Idler Sprocket                       |
| 58.  | -             | -        | -        | -        | 33SV29 | Reverse Idler Spacer                    |
| 59.  | 12V72         | "        | "        | "        | 33SV17 | Bronze Thrust Washer                    |
| *    | -             | -        | -        | -        | 33SV16 | LH Auger Spacer                         |
| 60.  | 12V104        | "        | "        | "        | -      | 20T Sprocket                            |
| *    | Optional      | Optional | Optional | Optional | ST11   | 13T Sprocket (1000 RPM)                 |
| 61.  | 5B10          | "        | -        | -        | -      | Key 1/4" x 1" Woodruff Key              |
| *    | -             | -        | G23      | "        | "      | Key 5/16" x 1-3/8" Sq. Key              |

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

" (Means Same as Preceding Number)

- (Means Not Used on This Model)

FIGURE 3



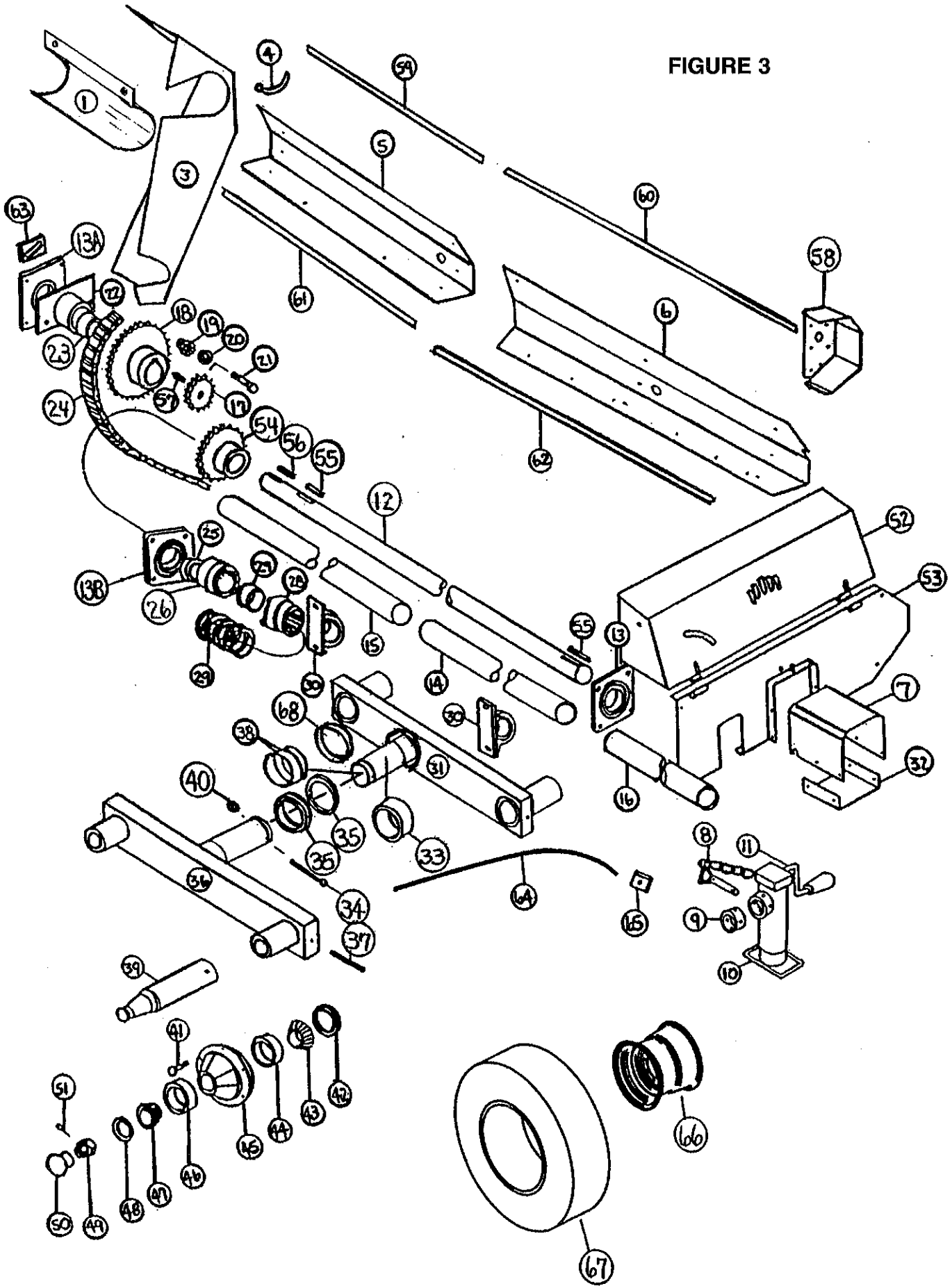


**FIGURE 3  
SHIELDS, SIDE SHAFT AND AXLE ASSEMBLIES**

| ITEM     | SPREADER SIZES |        |         |      |        | DESCRIPTION                             |
|----------|----------------|--------|---------|------|--------|---|
|          | 1506           | 1806   | 2206    | 2606 | 3306   |   |
| 1.       | 16SV415        | "      | "       | "    | "      | Clutch Shield                           |
| 3.       | 16SV53         | "      | 16SV257 | "    | "      | Top Beater Shield                       |
| 4.       | S192           | "      | "       | "    | "      | Handle Nut                              |
| 5.       | 12SV12         | 16SV54 | 16SV55  | "    | 33SV31 | Rear Side Shield                        |
| 6.       | 12SV13         | 16SV56 | 16SV57  | "    | 33SV32 | Front Side Shield                       |
| 7.       | 16SV329        | "      | "       | "    | "      | PTO Shield                              |
| 8.       | 12N13          | "      | "       | "    | "      | Jack Pin                                |
| 9.       | 12N14          | "      | "       | "    | "      | Jack Mount                              |
| 10.      | 27N14          | "      | "       | "    | "      | Jack                                    |
| 11.      | 12N12          | "      | "       | "    | "      | Jack Handle                             |
| *        | 12N9           | "      | "       | "    | "      | Jack Gear Replacement Kit               |
| 12.      | 12SV14         | 16SV59 | "       | "    | 33SV33 | Side Shaft                              |
| 13.      | 12V67          | "      | "       | "    | "      | Pillow Block Bearing                    |
| 13A.     | -              | -      | 12V67   | "    | "      | Pillow Block Bearing                    |
| 13B.     | 33SV106        | "      | "       | "    | "      | Pillow Block Bearing H.D.               |
| 14.      | -              | 16SV60 | "       | "    | 33SV34 | Side Center PVC Shield                  |
| 15.      | 12SV15         | 16SV61 | "       | "    | "      | Side Back PVC Shield                    |
| 16.      | 12SV16         | 16SV62 | "       | "    | 33SV35 | Side Front PVC Shield                   |
| 17.      | 12V77          | "      | "       | "    | "      | 12T Idler Sprocket                      |
| 18.      | 16SV63         | "      | "       | "    | "      | 23T Beater Sprocket                     |
| 19.      | 16SV64         | "      | "       | "    | "      | 3/4" Flange Nut                         |
| 20.      | T73            | "      | "       | "    | "      | Shim                                    |
| 21.      | HE8            | "      | "       | "    | "      | Bolt 3/4" x 2-1/4" GR.5                 |
| 22.      | 16SV65         | "      | -       | -    | -      | Outer Bearing                           |
| 23.      | 16SV66         | "      | -       | -    | -      | Bronze Bushing 1-3/4"ODx1-1/2"IDx2-1/8" |
| 24.      | 16SV67         | "      | -       | -    | -      | 2nd Beater Chain #80 64 Pitch           |
| *        | -              | -      | 16SV330 | "    | "      | 2nd Beater Chain #80 68 Pitch           |
| 25.      | 33SV107        | "      | "       | "    | "      | Clutch Stop                             |
| 26.      | 16SV69         | "      | "       | "    | "      | Keyed Clutch                            |
| 27.      | 16SV70         | "      | "       | "    | "      | Bronze Bushing 1-1/2"ODx1"IDx3/4"       |
| 28.      | 16SV71         | "      | "       | "    | "      | Splined Clutch                          |
| 29.      | 23N89          | "      | "       | "    | "      | Spring                                  |
| 30.      | 16SV72         | "      | "       | "    | "      | Pillow Block Bearing                    |
| 31.      | -              | 16SV73 | 16SV74  | "    | 33SV36 | Tandem Beam LH                          |
| Optional | 12SV17         | -      | -       | -    | -      | Tandem Beam LH                          |
| 32.      | 16SV327        | "      | "       | "    | "      | PTO Shield Bottom                       |
| 33.      | B58            | "      | 16SV75  | "    | "      | Bushing for Tandem Axle                 |
| 34.      | B61            | "      | -       | -    | -      | 1/2" x 5" Bolt GR.5 (For Axle)          |
| *        | -              | -      | 16SV77  | "    | "      | 1/2" x 6" Bolt GR.5 (For Axle)          |
| 35.      | 16SV78         | "      | 16SV214 | "    | "      | Collar for Axle                         |
| 36.      | -              | 16SV80 | 16SV81  | "    | 33SV37 | Tandem Beam RH                          |
| Optional | 12SV18         | -      | -       | -    | -      | Tandem Beam RH                          |
| 37.      | 31N4           | "      | "       | "    | "      | Roll Pin                                |
| 38.      | 16SV82         | "      | 16SV83  | "    | "      | Inner Bushing                           |

**(Continued on Pages 32 & 33)**

FIGURE 3

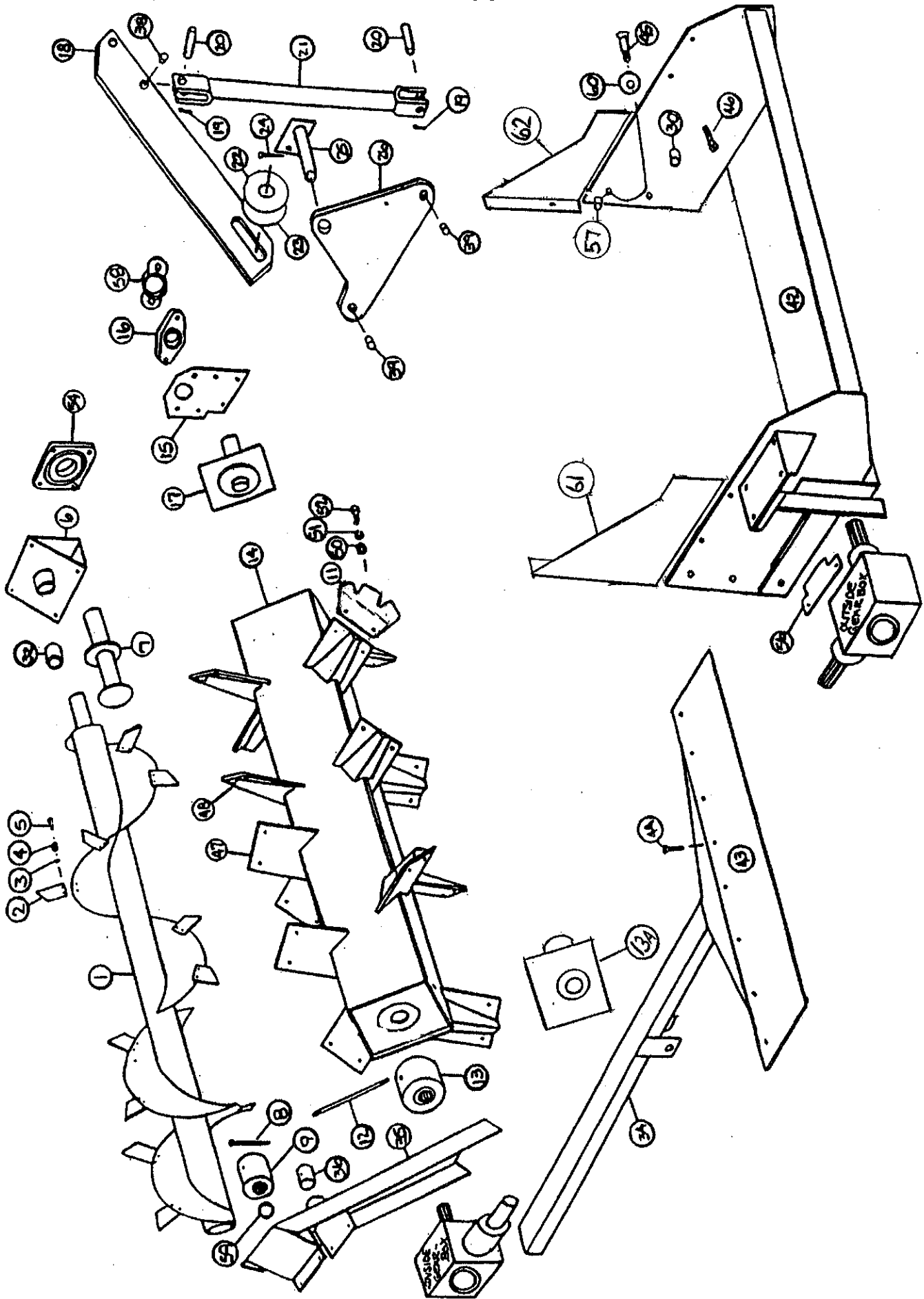


**FIGURE 3  
SHIELDS, SIDE SHAFT AND AXLE ASSEMBLIES**

| ITEM     | SPREADER SIZES |         |         |      |         | DESCRIPTION                          |
|----------|----------------|---------|---------|------|---------|--------------------------------------|
|          | 1506           | 1806    | 2206    | 2606 | 3306    |                                      |
| 39.      | 12SV26         | 37N8    | 16SV85  | "    | 33SV40  | Standard Spindle                     |
| Optional | -              | 16SV203 | -       | -    | -       | Spindle for 14 x 16.1 Wheel          |
| Optional | 31N2           | -       | -       | -    | -       | Spindle for 8 x 22.5 Wheel           |
| Optional | 12SV26         | 16SV203 | 16SV85  | "    | -       | Spindle for 13.5 x 22.5 Wheel        |
| 40.      | 9S17           | "       | "       | "    | "       | 1/2" Top Lock Nut                    |
| 41.      | 26G5           | "       | "       | "    | 33SV41  | Stud                                 |
| *        | 26G6           | "       | "       | "    | RG72    | Nut for Stud                         |
| Optional | B32            | -       | -       | -    | -       | Hub Bolt - Used w/Tandem Option      |
| 42.      | B90            | "       | "       | "    | 33SV42  | Seal                                 |
| Optional | B8             | -       | -       | -    | -       | Seal - Used w/Tandem Option          |
| 43.      | B91            | "       | "       | "    | 33SV43  | Inner Bearing                        |
| Optional | B7             | -       | -       | -    | -       | Inner Bearing - Used w/Tandem Option |
| 44.      | B91A           | "       | "       | "    | 33SV44  | Inner Race                           |
| Optional | B7A            | -       | -       | -    | -       | Inner Race - Used w/Tandem Option    |
| 45.      | 26G4A          | "       | "       | "    | 33SV45  | Hub                                  |
| Optional | B6             | -       | -       | -    | -       | Hub - Used w/Tandem Option           |
| 46.      | B94A           | "       | "       | "    | RG169   | Outer Race                           |
| Optional | B5A            | -       | -       | -    | -       | Outer Race - Used w/Tandem Option    |
| 47.      | B94            | "       | "       | "    | RG170   | Outer Bearing                        |
| Optional | B5             | -       | -       | -    | -       | Outer Bearing - Used w/Tandem Option |
| 48.      | B4             | "       | "       | "    | 33SV95  | Washer                               |
| 49.      | B3             | "       | "       | "    | RG17    | 1" Slotted Nut                       |
| 50.      | B2             | "       | "       | "    | RG171   | Hub Cap                              |
| 51.      | B31            | "       | "       | "    | 33SV46  | Cotter Pin                           |
| 52.      | 16SV322        | "       | "       | "    | 16SV323 | Main Shield                          |
| 53.      | 16SV324        | "       | "       | "    | 16SV325 | Main Shield Bottom                   |
| 54.      | ST11           | "       | "       | "    | "       | 13T Sprocket                         |
| 55.      | PB87           | "       | "       | "    | "       | Key 3/8" x 2" Sq.                    |
| 56.      | A32            | "       | "       | "    | "       | Key 3/8" x 1-3/8" Sq.                |
| 57.      | 16SV350        | "       | "       | "    | "       | Key 3/8" x 2" Round Ends             |
| 58.      | 16SV326        | "       | "       | "    | "       | Bearing Mount                        |
| 59.      | 12SV35         | 16SV226 | "       | "    | 33SV38  | Plastic Edging                       |
| 60.      | 12SV33         | 16SV224 | "       | "    | 33SV48  | Plastic Edging                       |
| 61.      | 12SV36         | 16SV227 | "       | "    | 33SV50  | Plastic Edging                       |
| 62.      | 12SV34         | 16SV225 | "       | "    | 33SV49  | Plastic Edging                       |
| 63.      | 16SV355        | "       | "       | "    | "       | Pillow Block Wedge                   |
| 64.      | -              | -       | 16SV364 | "    | 33SV103 | Grease Line                          |
| 65.      | -              | -       | 16V9    | "    | "       | Grease Block                         |
| 66.      | 12V36          | -       | "       | "    | -       | Wheel 14 x 16.1                      |
| *        | -              | 23N179  | -       | -    | -       | Wheel 8.250 x 22.5                   |
| *        | -              | -       | -       | -    | 16SV89  | Wheel 13.5 x 22.5                    |
| Optional | 16SV89         | "       | "       | "    | -       | Wheel 13.5 x 22.5                    |
| Optional | 23N179         | -       | -       | -    | -       | Wheel 8.250 x 22.5                   |
| Optional | -              | 12V36   | -       | -    | -       | Wheel 14 x 16.1                      |
| Optional | -              | -       | 33SV105 | "    | "       | Wheel 16 x 16.1                      |
| 67.      | 23N54          | -       | "       | "    | -       | Tire 16.5 x 16.1                     |
| *        | -              | -       | -       | -    | 16SV88  | Tire (TRUCK)                         |
| *        | -              | 23N180  | -       | -    | -       | Tire 11 x 22.5                       |
| Optional | 16SV88         | "       | "       | "    | -       | Tire (TRUCK)                         |
| Optional | -              | 23N54   | -       | -    | -       | Tire 16.5 x 16.1                     |
| Optional | -              | -       | 12V37   | "    | "       | Tire 19L x 16.1                      |
| Optional | 23N180         | -       | -       | -    | -       | Tire 11 x 22.5                       |
| 68.      | -              | B111    | -       | -    | -       | Phenolic Bushing                     |

**NOTE:** \* (Means Not Shown)  
 " (Means Same as Preceding Number)  
 - (Means Not Used on This Model)

FIGURE 4

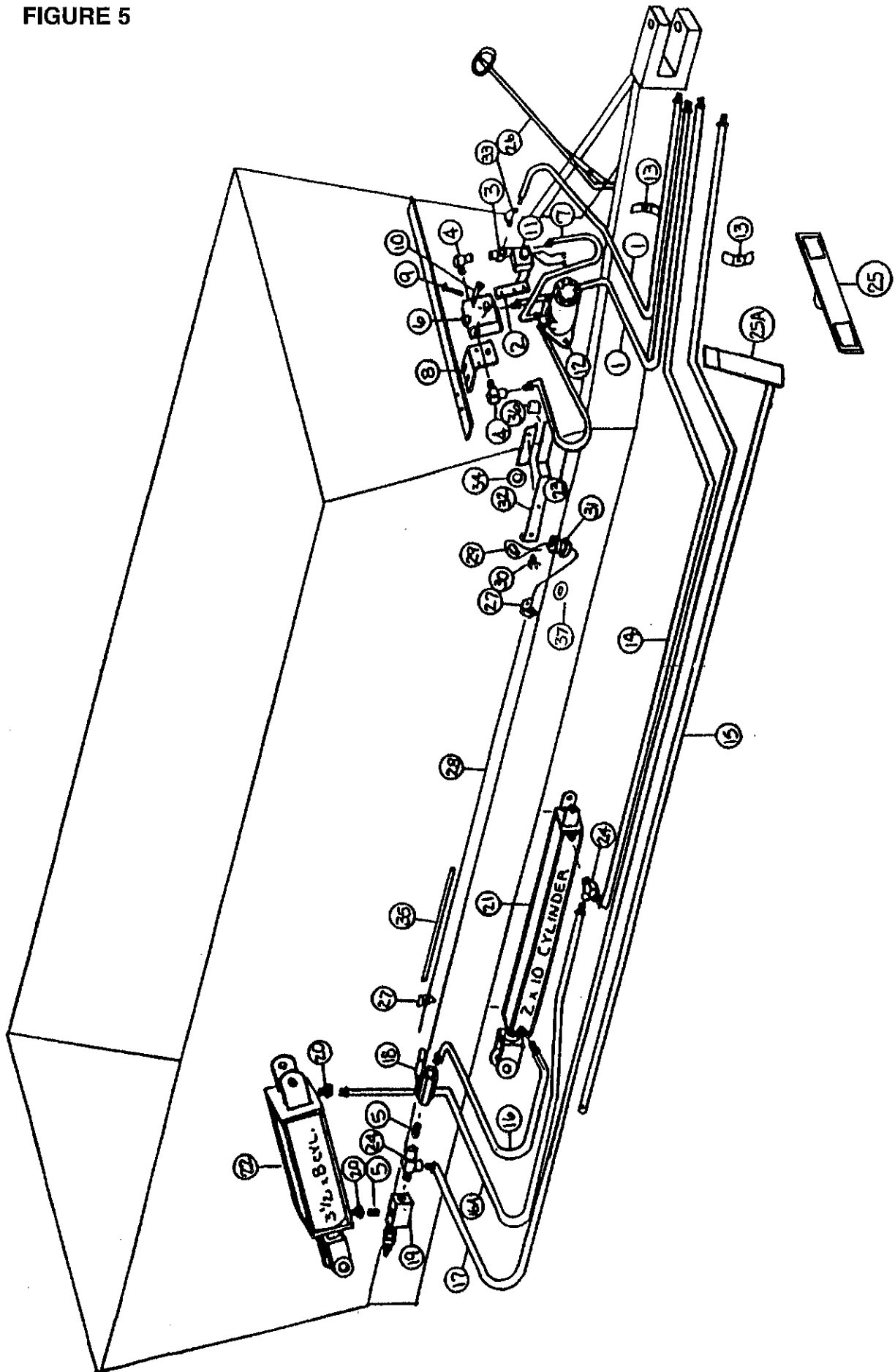


**FIGURE 4  
BEATERS AND PAN ASSEMBLIES**

| ITEM | SPREADER SIZES |         |         |      |        | DESCRIPTION                     |
|------|----------------|---------|---------|------|--------|---------------------------------|
|      | 1506           | 1806    | 2206    | 2606 | 3306   |                                 |
| 1.   | 33SV51         | "       | 33SV104 | "    | "      | Inside Beater                   |
| 2.   | 16SV93         | "       | "       | "    | "      | Beater Tooth                    |
| 3.   | R35            | "       | "       | "    | "      | 1/2" Lock Washer                |
| 4.   | R11            | "       | "       | "    | "      | 1/2" Lock Nut                   |
| 5.   | R10            | "       | "       | "    | "      | Bolt 1/2" x 1-1/4"              |
| 6.   | 33SV52         | "       | "       | "    | "      | RH Beater Bearing               |
| 7.   | 33SV53         | "       | "       | "    | "      | Beater Stub Shaft               |
| 8.   | 23N1           | "       | "       | "    | "      | Bolt 5/16" x 5" GR.5            |
| 9.   | 23N2           | "       | 43NW1   | "    | "      | Splined Beater Insert           |
| 11.  | 16SV416        | "       | "       | "    | "      | Beater Blade                    |
| 12.  | 16SV308        | "       | "       | "    | "      | Beater Bolt                     |
| 13.  | 23N2           | "       | "       | "    | "      | Splined Beater Insert           |
| 13A. | 16SV381        | "       | "       | "    | "      | Beater Insert W/ Plate          |
| 14.  | 16SV400        | "       | "       | "    | "      | Beater                          |
| 15.  | 16SV309        | "       | "       | "    | "      | Beater Bearing Mount            |
| 16.  | 16SV336        | "       | "       | "    | "      | Pillow Block Bearing            |
| 17.  | 16SV310        | "       | "       | "    | "      | Beater Stub Shaft               |
| 18.  | 16SV103        | "       | "       | "    | 33SV54 | Door Lift Bar                   |
| 19.  | T72            | "       | "       | "    | "      | 5/32" x 1-1/2" Cotter Pin       |
| 20.  | 16SV104        | "       | "       | "    | "      | Lifting Arm Pins                |
| 21.  | 16SV105        | "       | "       | "    | "      | Lifting Arm                     |
| 22.  | 16SV106        | "       | "       | "    | "      | Washer                          |
| 23.  | 16SV107        | "       | "       | "    | "      | Poly Door Washer                |
| 24.  | 16SV108        | "       | "       | "    | "      | Cotter Pin                      |
| 25.  | 16SV340        | "       | "       | "    | "      | Bell Crank Hinge                |
| 26.  | 16SV273        | "       | "       | "    | "      | Bell Crank                      |
| 30.  | 16SV210        | "       | "       | "    | "      | Spacer 15/16" x 1"              |
| 32.  | 16SV215        | "       | "       | "    | "      | Bushing                         |
| 34.  | 12SV48         | 16SV311 | "       | "    | 33SV89 | Clean-Out Door                  |
| 35.  | 16SV119        | "       | 16SV268 | "    | "      | Gearbox Mount                   |
| 36.  | 16SV120        | "       | S44     | "    | "      | Bronze Bushing                  |
| 38.  | 16SV261        | "       | "       | "    | "      | Door Lift Bar Bushing           |
| 39.  | 16SV262        | "       | "       | "    | "      | Bell Crank Bushing              |
| 42.  | 16SV403        | "       | "       | "    | "      | Back Pan                        |
| 43.  | 16SV312        | "       | "       | "    | "      | Clean-Out Door Poly             |
| 44.  | 16SV124        | "       | "       | "    | "      | Bolt 5/16" x 1" Counter Sunk    |
| 45.  | 16SV125        | "       | "       | "    | "      | Bolt 1/2" x 1-3/4" Counter Sunk |
| 46.  | 16SV126        | "       | "       | "    | "      | Bolt 1/2" x 2" Counter Sunk     |
| 47.  | 16SV313A       | "       | "       | "    | "      | LH Blade Holder                 |
| 48.  | 16SV314A       | "       | "       | "    | "      | RH Blade Holder                 |
| 50.  | R10            | "       | "       | "    | "      | 1/2-13 x 1-1/4" Bolt GR.5       |
| 51.  | R35            | "       | "       | "    | "      | 1/2" Lock Washer                |
| 52.  | R11            | "       | "       | "    | "      | 1/2" Lock Nut                   |
| 54.  | 33SV65         | "       | "       | "    | "      | Inside Beater Bearing           |
| 56.  | 16SV315        | "       | "       | "    | "      | Beater Wiper                    |
| 57.  | X112           | "       | "       | "    | "      | Spacer 9/16" x 1"               |
| 58.  | 16SV346        | "       | "       | "    | "      | Bearing Cap                     |
| 59.  | -              | -       | 16SV353 | "    | "      | Seal                            |
| 60.  | 16SV116        | "       | "       | "    | "      | Door Stop Washer                |
| 61.  | 16SV417        | "       | "       | "    | "      | Pan Extension LH                |
| 62.  | 16SV418        | "       | "       | "    | "      | Pan Extension RH                |

**NOTE:** " (Means Same as Preceding Number)

FIGURE 5



**FIGURE 5  
HYDRAULICS**

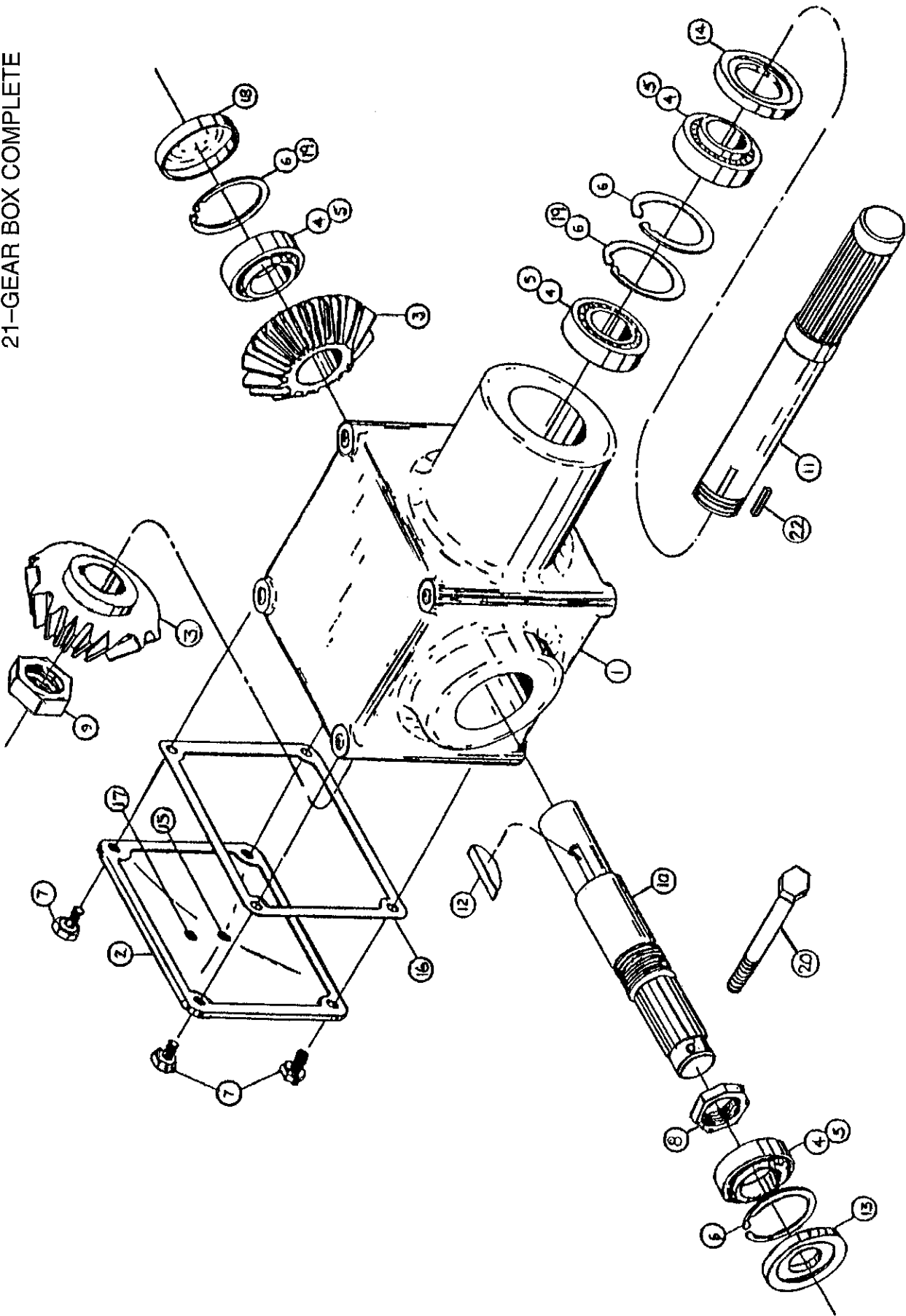
| ITEM | SPREADER SIZES |         |         |      |        | DESCRIPTION                     |
|------|----------------|---------|---------|------|--------|---------------------------------|
|      | 1506           | 1806    | 2206    | 2606 | 3306   |                                 |
| 1.   | 16SV129        | "       | "       | "    | "      | Hose 1/2" x 108"                |
| 2.   | 16SV245        | "       | "       | "    | "      | Speed Control Motor Mount       |
| 3.   | 16SV352        | "       | "       | "    | "      | Service Tee 1/2"                |
| 4.   | HE58           | "       | "       | "    | "      | 1/2" Hyd. Street Elbow          |
| 5.   | 16SV351        | "       | "       | "    | "      | 3/8" Male Coupling              |
| 6.   | 16SV347        | "       | "       | "    | "      | Speed Control Valve             |
| 7.   | 16SV143        | "       | -       | -    | -      | Hose 1/2" x 19"                 |
| *    | -              | -       | 16SV144 | "    | "      | Hose 1/2" x 41"                 |
| 8.   | 16SV331        | "       | "       | "    | 33SV94 | Valve Mount                     |
| 9.   | X26            | "       | "       | "    | "      | Bolt 3/8" x 3" Full Thread      |
| 10.  | 16SV242        | "       | "       | "    | "      | Speed Valve Pointer             |
| 11.  | 16SV246        | "       | "       | "    | "      | Gear Motor                      |
| 12.  | 16SV149        | "       | 16SV150 | "    | "      | Motor                           |
| 13.  | 23N67          | "       | "       | "    | "      | Hydraulic Hose Holder           |
| 14.  | 12SV51         | -       | -       | -    | -      | Hose 3/8" x 236"                |
| *    | -              | 23N302  | "       | "    | -      | Hose 3/8" x 264"                |
| *    | -              | -       | -       | -    | 27N45  | Hose 3/8" x 288"                |
| 15.  | 12SV50         | 16SV337 | "       | "    | 33SV93 | Door Rod                        |
| 16.  | -              | BFR53   | "       | "    | "      | Hose 3/8" x 56"                 |
| *    | 12SV23         | -       | -       | -    | -      | Hose 3/8" x 36"                 |
| 16A. | BFR53          | "       | "       | "    | -      | Hose 3/8" x 56"                 |
| *    | -              | -       | -       | -    | 33SV60 | Hose 3/8" x 68"                 |
| 17.  | 12SV52         | -       | -       | -    | -      | Hose 3/8" x 256"                |
| *    | -              | 27N45   | "       | "    | -      | Hose 3/8" x 288"                |
| *    | -              | -       | -       | -    | 37N80  | Hose 3/8" x 318"                |
| 18.  | 16SV338        | "       | "       | "    | "      | Ball Valve                      |
| 19.  | 16SV339        | "       | "       | "    | "      | Sequence Valve                  |
| 20.  | JB82           | "       | "       | "    | "      | 1/2" to 3/8" Bushing            |
| 21.  | 16SV171        | "       | "       | "    | "      | 2" x 10" Cylinder               |
| 22.  | 16SV167        | "       | "       | "    | "      | 3-1/2" x 8" Cylinder            |
| 23.  | 16SV141        | "       | "       | "    | "      | Hose 1/2" x 24"                 |
| *    | -              | -       | 16SV142 | "    | "      | Hose 1/2" x 46"                 |
| 24.  | 23N116         | "       | "       | "    | "      | 3/8" Tee                        |
| 25.  | 16SV148A       | "       | "       | "    | "      | Indicator Bar (Standard)        |
| 25A. | 16SV148        | "       | "       | "    | "      | Indicator Bar (Removable Hitch) |
| 26.  | 16SV332        | "       | "       | "    | "      | Hose Holder                     |
| 27.  | 16SV333        | "       | "       | "    | "      | Cable Guide                     |
| 28.  | 12SV49         | 16SV334 | "       | "    | 33SV90 | Cable                           |
| 29.  | ES14           | "       | "       | "    | "      | Thimble                         |
| 30.  | 16SV342        | "       | "       | "    | "      | Cable Clamp                     |
| 31.  | F33            | "       | "       | "    | "      | Cable Insulator                 |
| 32.  | 16SV335        | "       | "       | "    | "      | Pointer                         |
| 33.  | HE58           | "       | "       | "    | "      | Street Elbow 1/2"               |
| 34.  | 16SV354        | "       | "       | "    | "      | Pointer Washer                  |
| 35.  | 16SV365        | "       | "       | "    | "      | Cable Guard                     |
| 36.  | 16SV366        | "       | "       | "    | "      | Pointer Shielding               |
| 37.  | ST57           | "       | "       | "    | "      | Plastic Cable Grommet           |

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

" (Means Same as Preceding Number)

- (Means Not Used on This Model)

FIGURE 6  
21-GEAR BOX COMPLETE



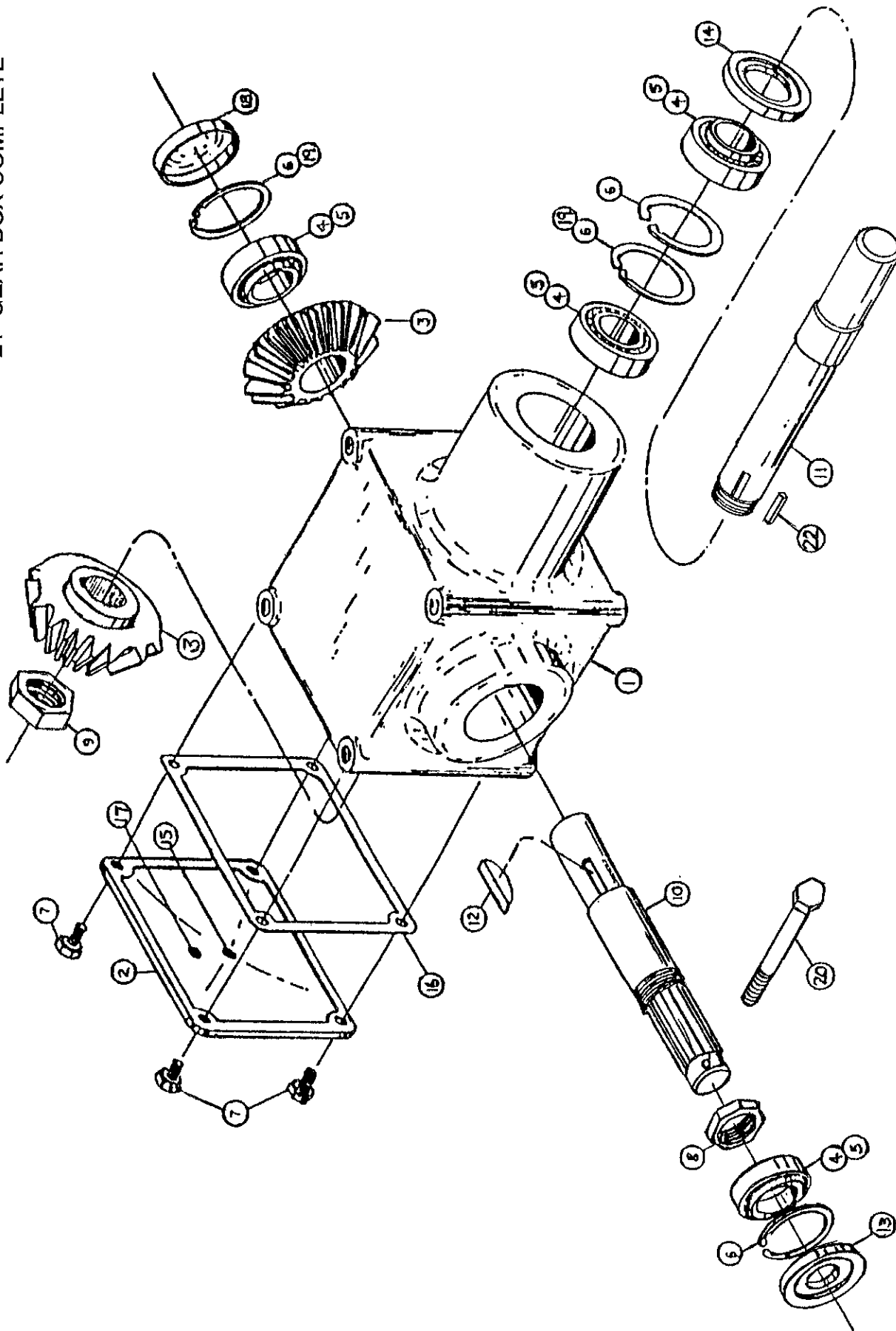


**FIGURE 6  
GEARBOX - OUTSIDE BEATER**

| ITEM | SPREADER SIZES |      |      |      |      | DESCRIPTION                    |
|------|----------------|------|------|------|------|--------------------------------|
|      | 1506           | 1806 | 2206 | 2606 | 3306 |                                |
| 1.   | G50            | "    | "    | "    | "    | Housing                        |
| 2.   | G51            | "    | "    | "    | "    | Cover                          |
| 3.   | G52            | "    | "    | "    | "    | Bevel Gear                     |
| 4.   | G53            | "    | "    | "    | "    | Bearing #14137A                |
| 5.   | G54            | "    | "    | "    | "    | Bearing Cup #14276             |
| 6.   | G55            | "    | "    | "    | "    | Snap Ring                      |
| 7.   | G56            | "    | "    | "    | "    | Capscrew                       |
| 8.   | G57            | "    | "    | "    | "    | 1-1/2" Stake Nut               |
| 9.   | G58            | "    | "    | "    | "    | 1-3/8" Stake Nut               |
| 10.  | 23N137         | "    | "    | "    | "    | Output Shaft                   |
| 11.  | G94            | "    | "    | "    | "    | Input Shaft                    |
| 12.  | G61            | "    | "    | "    | "    | "E" (1210) Woodruff Key        |
| 13.  | G63            | "    | "    | "    | "    | Seal - Output                  |
| 14.  | G64            | "    | "    | "    | "    | Seal - Input                   |
| 15.  | G65            | "    | "    | "    | "    | Plug 3/8" NPT                  |
| 16.  | G66            | "    | "    | "    | "    | Gasket                         |
| 17.  | G67            | "    | "    | "    | "    | Plug 1/8" NPT                  |
| 18.  | G68            | "    | "    | "    | "    | Cap                            |
| 19.  | G69            | "    | "    | "    | "    | Shim                           |
| 20.  | 23N1           | "    | "    | "    | "    | 5/16" x 5" Bolt GR.5           |
| 21.  | 16SV156        | "    | "    | "    | "    | Bevel Gearbox Complete         |
| 22.  | G62            | "    | "    | "    | "    | Key 3/8" Sq. x 1-3/8" Hardened |

**NOTE:** " (Means Same as Preceding Number)

FIGURE 7  
21-GEAR BOX COMPLETE

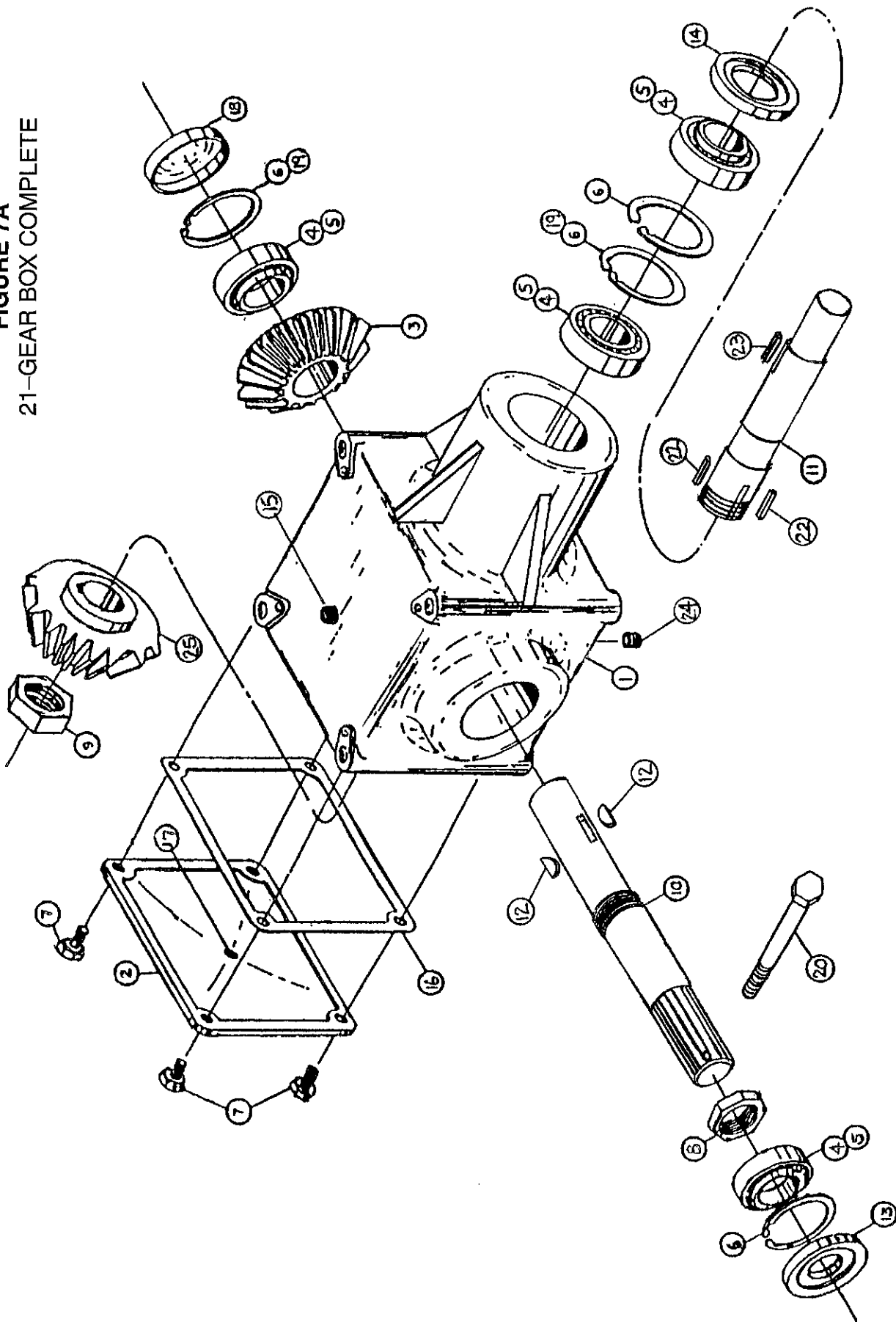


**FIGURE 7  
GEARBOX - INSIDE BEATER**

| ITEM | SPREADER SIZES |      | DESCRIPTION                    |
|------|----------------|------|--------------------------------|
|      | 1506           | 1806 |                                |
| 1.   | G50            | "    | Housing                        |
| 2.   | G51            | "    | Cover                          |
| 3.   | G52            | "    | Gear                           |
| 4.   | G53            | "    | Bearing #14137A                |
| 5.   | G54            | "    | Bearing Cup #14276             |
| 6.   | G55            | "    | Snap Ring                      |
| 7.   | G56            | "    | Capscrew                       |
| 8.   | G57            | "    | 1-1/2" Stake Nut               |
| 9.   | G58            | "    | 1-3/8" Stake Nut               |
| 10.  | 16SV153        | "    | Output Shaft                   |
| 11.  | 16SV154        | "    | Input Shaft                    |
| 12.  | G61            | "    | "E" (1210) Woodruff Key        |
| 13.  | G63            | "    | Seal - Output                  |
| 14.  | G64            | "    | Seal - Input                   |
| 15.  | G65            | "    | Plug 3/8" NPT                  |
| 16.  | G66            | "    | Gasket                         |
| 17.  | G67            | "    | Plug 1/8" NPT                  |
| 18.  | G68            | "    | Cap                            |
| 19.  | G69            | "    | Shim                           |
| 20.  | 23N1           | "    | 5/16" x 5" Bolt GR.5           |
| 21.  | 16SV155        | "    | Bevel Gearbox Complete         |
| 22.  | G62            | "    | Key 3/8" Sq. x 1-3/8" Hardened |

**NOTE:** " (Means Same as Preceding Number)

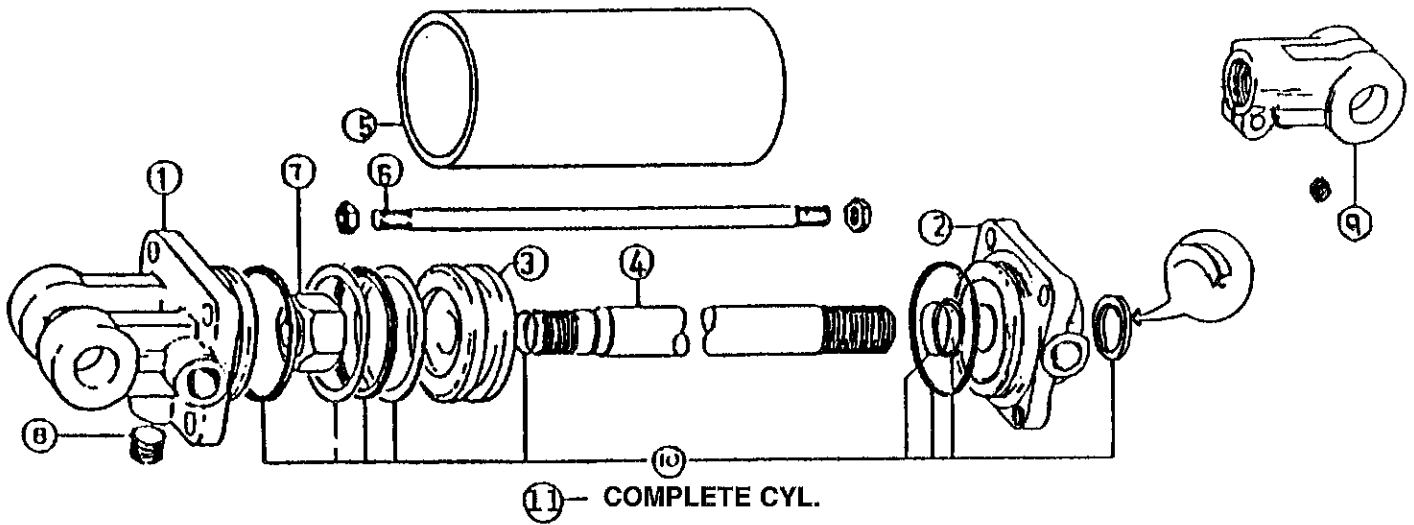
FIGURE 7A  
21-GEAR BOX COMPLETE



**FIGURE 7A  
GEARBOX - INSIDE BEATER**

| ITEM | SPREADER SIZES |      |      | DESCRIPTION                             |
|------|----------------|------|------|---|
|      | 2206           | 2606 | 3306 |   |
| 1.   | G125           | "    | "    | Housing                                 |
| 2.   | G126           | "    | "    | Cover                                   |
| 3.   | G147           | "    | "    | Gear                                    |
| 4.   | G129           | "    | "    | Bearing #14137A                         |
| 5.   | G128           | "    | "    | Bearing Cup #14276                      |
| 6.   | G130           | "    | "    | Snap Ring                               |
| 7.   | G56            | "    | "    | Capscrew                                |
| 8.   | G132           | "    | "    | 1-1/2" Stake Nut                        |
| 9.   | G133           | "    | "    | 1-3/8" Stake Nut                        |
| 10.  | G148           | "    | "    | Output Shaft                            |
| 11.  | G149           | "    | "    | Input Shaft                             |
| 12.  | G61            | "    | "    | "E" (1210) Woodruff Key                 |
| 13.  | G136           | "    | "    | Seal - Output                           |
| 14.  | G137           | "    | "    | Seal - Input                            |
| 15.  | G144           | "    | "    | Plug 3/8" NPT                           |
| 16.  | G138           | "    | "    | Gasket                                  |
| 17.  | G67            | "    | "    | Plug 1/8" NPT                           |
| 18.  | G140           | "    | "    | Cap                                     |
| 19.  | G141           | "    | "    | Shim                                    |
| 20.  | 23N1           | "    | "    | 5/16" x 5" Bolt GR.5                    |
| 21.  | 33SV78         | "    | "    | Bevel Gearbox Complete                  |
| 22.  | G139           | "    | "    | 3/8" Sq. x 1-1/2" Square Key (Hardened) |
| 23.  | 16SV350        | "    | "    | 3/8" Sq. x 2" Square Key W/Round Ends   |
| 24.  | G65            | "    | "    | 3/8" NPT Plug                           |
| 25.  | G147           | "    | "    | Gear                                    |

**NOTE:** " (Means Same as Preceding Number)

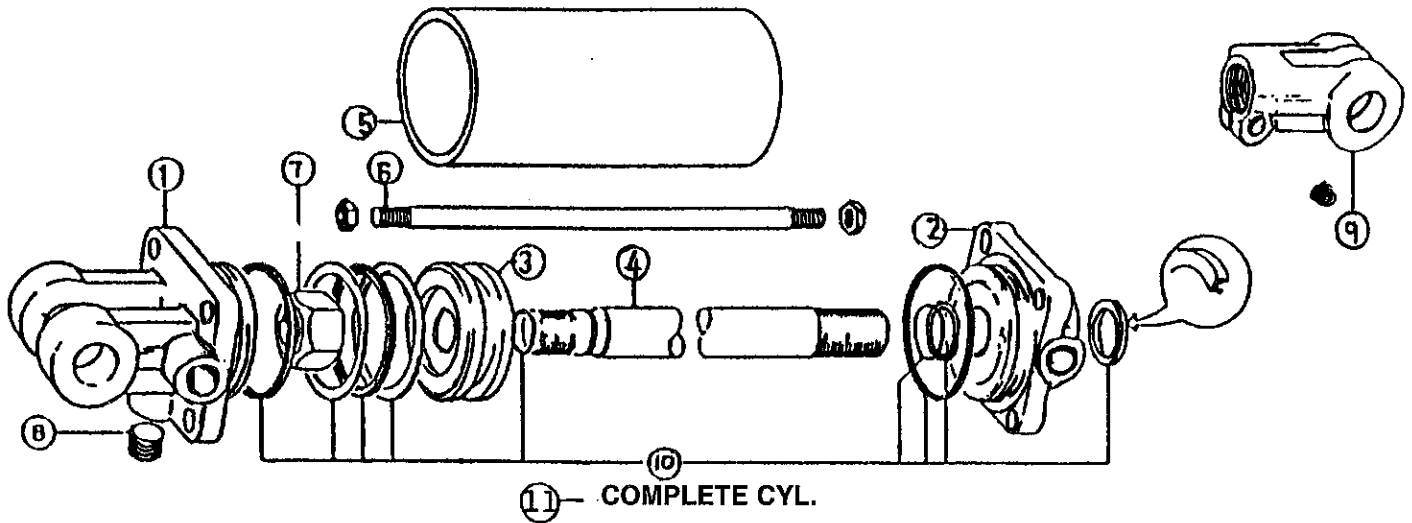


**FIGURE 8**  
**HYDRAULIC CYLINDER - BACK DOOR**

**SPREADER SIZES**

| ITEM | 1502     | 1802 | 2202 | 2602 | 3302 | DESCRIPTION                 |
|------|----------|------|------|------|------|-----------------------------|
| 1.   | 16SV157A | "    | "    | "    | "    | Clevis Cap                  |
| 2.   | 16SV158A | "    | "    | "    | "    | Rod Cap                     |
| 3.   | 16SV159  | "    | "    | "    | "    | Piston                      |
| 4.   | 16SV160A | "    | "    | "    | "    | Rod                         |
| 5.   | 16SV161  | "    | "    | "    | "    | Cylinder Tube               |
| 6.   | 16SV162  | "    | "    | "    | "    | Tie Rod                     |
| 7.   | 16SV163  | "    | "    | "    | "    | Piston Nut                  |
| 8.   | 16SV164  | "    | "    | "    | "    | Plug                        |
| 9.   | 16SV165A | "    | "    | "    | "    | Rod Clevis                  |
| 10.  | 16SV166  | "    | "    | "    | "    | Seal Kit                    |
| 11.  | 16SV167A | "    | "    | "    | "    | Complete Hydraulic Cylinder |

**NOTE:** " (Means Same as Preceding Number)

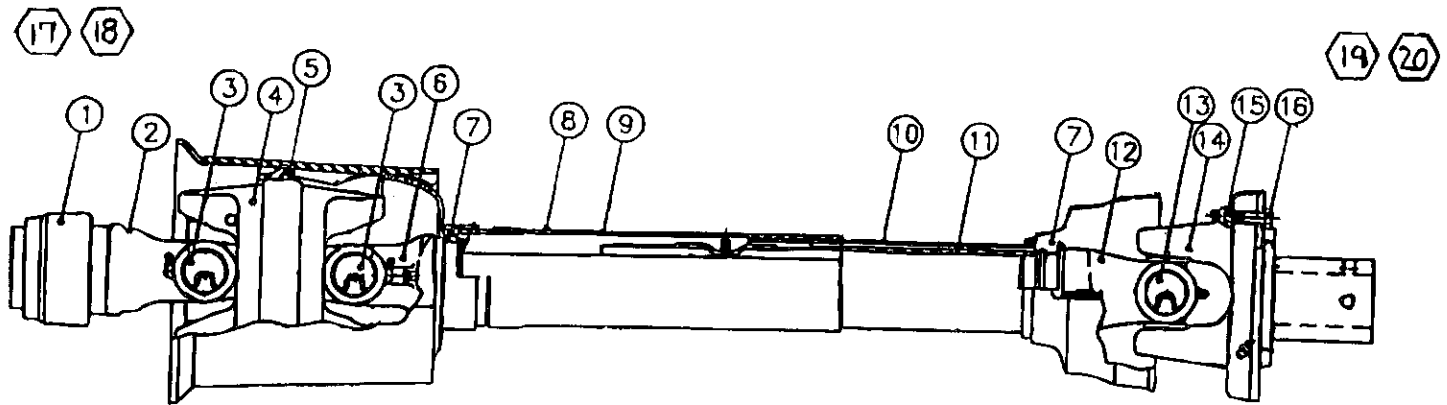


**FIGURE 9  
HYDRAULIC CYLINDER - CLEAN OUT DOOR**

**SPREADER SIZES**

| <b>ITEM</b> | <b>1502</b> | <b>1802</b> | <b>2202</b> | <b>2602</b> | <b>3302</b> | <b>DESCRIPTION</b>          |
|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------------|
| 1.          | 23N142A     | "           | "           | "           | "           | Clevis Cap                  |
| 2.          | 23N143A     | "           | "           | "           | "           | Rod Cap                     |
| 3.          | 23N144      | "           | "           | "           | "           | Piston                      |
| 4.          | 16SV168A    | "           | "           | "           | "           | Rod                         |
| 5.          | 16SV169     | "           | "           | "           | "           | Cylinder Tube               |
| 6.          | 16SV170     | "           | "           | "           | "           | Tie Rod                     |
| 7.          | 23N148      | "           | "           | "           | "           | Piston Nut                  |
| 8.          | 23N149      | "           | "           | "           | "           | Plug                        |
| 9.          | 23N150A     | "           | "           | "           | "           | Rod Clevis                  |
| 10.         | 23N151      | "           | "           | "           | "           | Seal Kit                    |
| 11.         | 16SV171A    | "           | "           | "           | "           | Complete Hydraulic Cylinder |

**NOTE:** " (Means Same as Preceding Number)



**FIGURE 10**  
**PTO**

| ITEM | 540RPM  | 1000RPM-1-3/8" | 1000RPM-1-3/4" | DESCRIPTION                      |
|------|---------|----------------|----------------|----------------------------------|
| 1.   | 16SV274 | "              | 16SV275        | Safety Slide Lock Repair Kit     |
| 2.   | 16SV276 | 16SV277        | 16SV278        | Safety Slide Lock Yoke Assembly  |
| 3.   | 16SV279 | "              | "              | Cross & Bearing Kit (CAT. 4)     |
| 4.   | 16SV280 | "              | "              | Center Housing                   |
| 5.   | 16SV281 | "              | "              | Bell Ext. w/Nylon Centralizer    |
| 6.   | 16SV282 | "              | "              | Yoke & Shaft                     |
| 7.   | 16SV181 | "              | "              | Nylon Repair Kit                 |
| 8.   | 16SV283 | "              | "              | Safety Sign                      |
| 9.   | 16SV284 | "              | "              | Outer Guard                      |
| 10.  | 16SV285 | "              | "              | Inner Guard                      |
| 11.  | 16SV286 | "              | "              | Safety Sign                      |
| 12.  | 16SV287 | "              | "              | Yoke, Tube & Slip Sleeve         |
| 13.  | 16SV179 | "              | "              | 35R Cross & Bearing Kit          |
| 14.  | 16SV288 | "              | "              | Ball Shear Assembly              |
| 15.  | 16SV194 | "              | "              | Lock Nut 5/16"-18                |
| 16.  | -       | 16SV289        | "              | Bolt 5/16"-18 x 1-1/2" GR.2      |
| *    | 16SV290 | -              | -              | Bolt 5/16"-18 x 1-1/2" GR.8      |
| 17.  | 16SV291 | 16SV292        | 16SV293        | Joint & Shaft Half Assm. w/Guard |
| 18.  | 16SV294 | 16SV295        | 16SV296        | Joint & Shaft Half Assm.         |
| 19.  | 16SV297 | 16SV298        | "              | Joint & Tube Half Assm. w/Guard  |
| 20.  | 16SV299 | 16SV300        | "              | Joint & Tube Half Assm.          |
| *    | 16SV343 | 16SV344        | 16SV345        | Complete PTO                     |
| *    | S204    | "              | "              | PTO Safety Manual                |

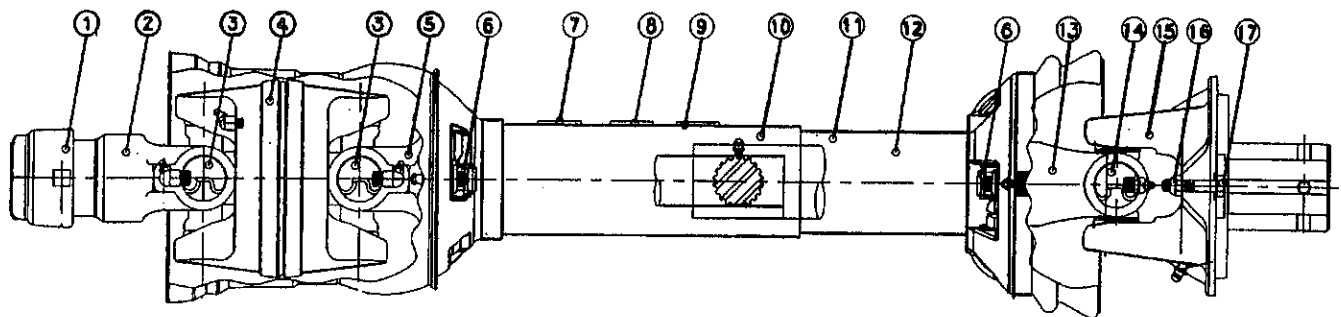
**NOTE:** \* (Means Not Shown)

" (Means Same as Preceding Number)

- (Means Not Used on This Model)

*This PTO is for 2004 Model Year and Prior*



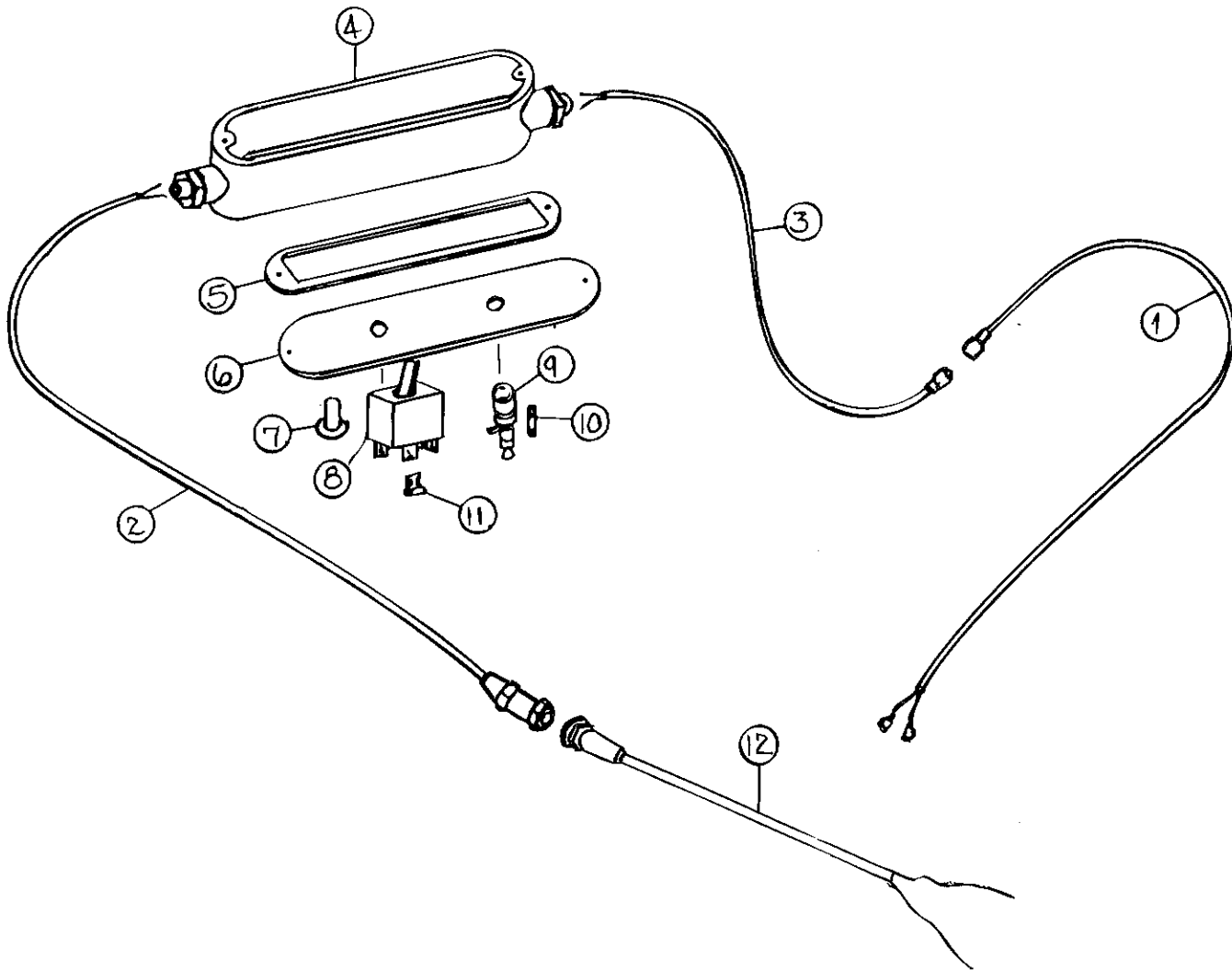


**FIGURE 11**  
**PTO**

| ITEM | OPT. 540RP | 1000RPM-1-3/8" | 1000RPM-1-3/4" | DESCRIPTION                      |
|------|------------|----------------|----------------|----------------------------------|
| 1.   | 16SV274    | "              | 16SV275        | Safety Slide Lock Repair Kit     |
| 2.   | 16SV276    | 16SV277        | 16SV278        | Safety Slide Lock Yoke Assembly  |
| 3.   | 16SV279    | "              | "              | Cross Kit                        |
| 4.   | 16SV382    | "              | "              | Center Housing                   |
| 5.   | 16SV282    | "              | "              | Yoke & Shaft                     |
| 6.   | 16SV383    | "              | "              | Nylon Repair Kit                 |
| 7.   | 16SV283    | "              | "              | Safety Sign                      |
| 8.   | 16SV286    | "              | "              | Safety Sign                      |
| 9.   | 16SV384    | "              | "              | 540 RPM Sign                     |
| 10.  | 16SV385    | 16SV386        | 16SV385        | Outer Guard                      |
| 11.  | 16SV287    | "              | "              | Inner Guard                      |
| 12.  | 16SV388    | "              | "              | Safety Sign (Not Shown)          |
| 13.  | 16SV287    | "              | "              | Yoke, Tube & Slip Sleeve         |
| 14.  | 16SV179    | "              | "              | 35R Cross & Bearing Kit          |
| 15.  | 16SV288    | "              | "              | Ball Shear Assembly              |
| 16.  | 16SV193    | "              | "              | Lock Nut 5/16"-18                |
| 17.  | 16SV290    | -              | -              | Bolt 5/16"-18 x 1-1/2" GR.8      |
| *    | -          | 16SV289        | "              | Bolt 5/16"-18 x 1-1/2" GR.2      |
| 18.  | 16SV389    | 16SV390        | 16SV391        | Joint & Shaft Half Assm. w/Guard |
| 19.  | 16SV392    | 16SV393        | 16SV394        | Joint & Shaft Half Assm.         |
| 20.  | 16SV395    | 16SV396        | 16SV397        | Joint & Tube Half Assm. w/Guard  |
| 21.  | 16SV299    | 16SV300        | "              | Joint & Tube Half Assm.          |
| *    | 16SV343A   | 16SV344A       | 16SV345A       | Complete PTO                     |

**NOTE:** \* (Means Not Shown)  
 " (Means Same as Preceding Number)  
 - (Means Not Used on This Model)

*This PTO is for 2005 Model Year and After*



**FIGURE 12  
ELECTRIC CONTROL BOX**

| ITEM      | PART NO. | DESCRIPTION                              |
|-----------|----------|--|
| 1.        | 16SV272  | Spreader 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.        | 16SV319  | Auger Speed Switch                       |
| 9.        | 16SV231  | Fuse Holder                              |
| 10.       | 16SV232  | Fuse                                     |
| 11.       | 16SV320  | Flag                                     |
| 12.       | 16SV269  | Tractor Control Cord                     |
| Not Shown | 16SV321  | Control Box Complete                     |

## H&S ALL PURPOSE MANURE SPREADERS

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

### SPECIFICATIONS

| MODEL NO.                    | 1506     | 1806     | 2206     | 2606     | 3306     |
|------------------------------|----------|----------|----------|----------|----------|
| Struck                       | 200      | 240      | 292      | 348      | 441      |
| Gallon Capacity              | 1502     | 1802     | 2202     | 2602     | 3302     |
| Bu. Capacity (Old ASAE)      | 300      | 375      | 450      | 540      | 684      |
| Loading Height               | 62"      | 58"      | 63"      | 69"      | 77"      |
| Height w/Splashguard (Front) | 69"      | 64"      | 69"      | 75"      | 77"      |
| Overall Length               | 19' 7"   | 23' 6"   | 23' 6"   | 23' 6"   | 25' 8"   |
| Inside Length                | 12'      | 16'      | 16'      | 16'      | 18'      |
| Width of Tank Top            | 78"      | 78"      | 78"      | 78"      | 78"      |
| Overall Width w/11x22.5      | 87"      | 91"      | -        | -        | -        |
| Overall Width w/16.5 x 16.1  | 92"      | 103"     | 103"     | 103"     | -        |
| Overall Width w/425 x 22.5   | -        | -        | -        | 104-1/2" | 104-1/2" |
| Weight w/Tires               | 5530     | 6870     | 6970     | 7450     | 8700     |
| Axle                         | Single   | Tandem   | Tandem   | Tandem   | Tandem   |
| PTO Drive                    | 540/1000 | 540/1000 | 540/1000 | 540/1000 | 1000     |
| Copper Bearing Steel Tank    | Yes      | Yes      | Yes      | Yes      | Yes      |
| Shear Bolt Protection        | Yes      | Yes      | Yes      | Yes      | Yes      |
| Front and Rear Splash Guards | Yes      | Yes      | Yes      | Yes      | Yes      |
| Inside Beater                | Yes      | Yes      | Yes      | Yes      | Yes      |
| Auger Diameter               | 18"      | 18"      | 18"      | 18"      | 18"      |

#### NOTE

Determine right or left side of spreader by viewing it from the rear. If instructions or parts lists call for hardened bolts, they are identified with three lines or marks on the head.

## H&S MANUFACTURING CO. INC.

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P.O. Box 1260 - Telephone (716) 736-7595  
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RIPLEY, NY 14775

# **H&S MFG. CO.**

products approved

for the

## **FEMA**

# **SEAL OF QUALITY**

