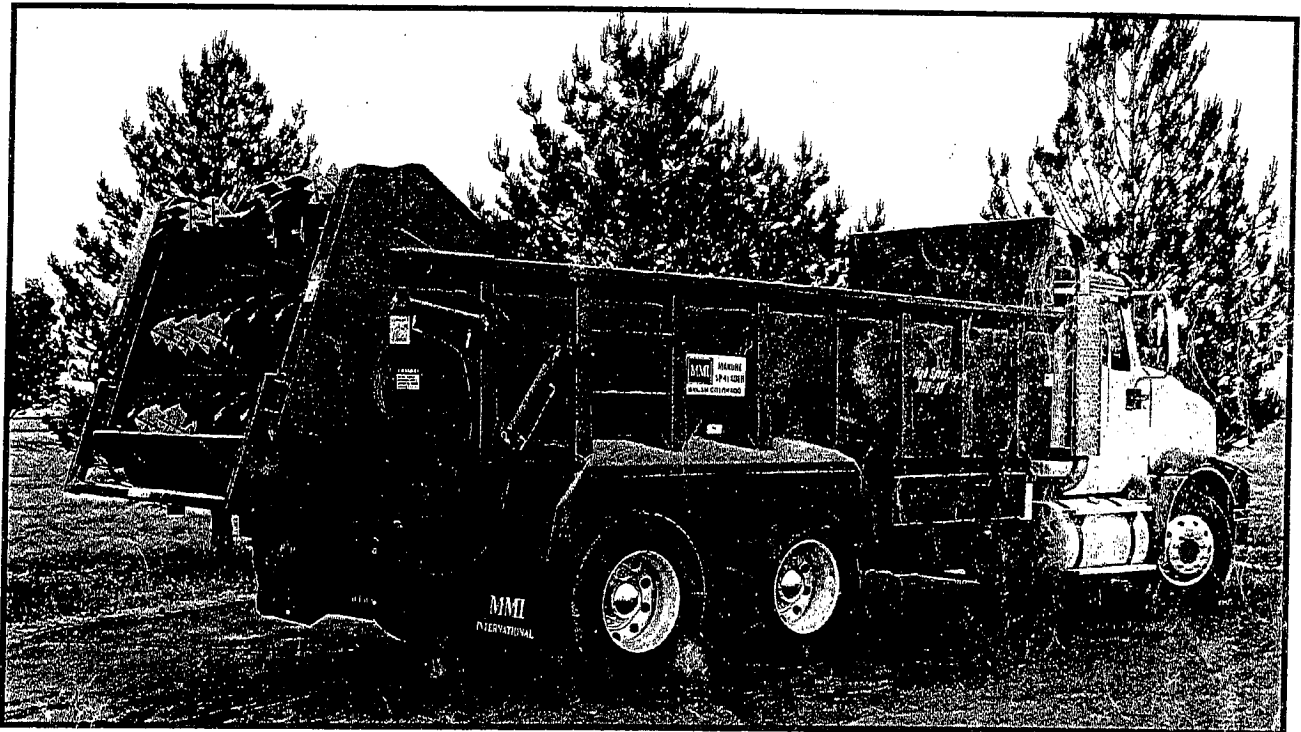




**INTERNATIONAL**

**COMMERCIAL  
MANURE SPREADER**



**EXTRA HEAVY DUTY  
HIGH SPEED  
14' THRU 22'**

**OPERATORS MANUAL**



# TABLE OF CONTENTS

## **OPERATION AND MAINTENANCE**

INTRODUCTION .....	3
REGISTRATION .....	4
WARRANTY .....	6
SAFETY FIRST .....	7
GENERAL SPECIFICATION .....	9
TRUCK SPECIFICATION .....	10-11
TRAILER SPECIFICATION .....	12-13
PRE-OPERATION .....	14
OPERATION .....	15
GENERAL MAINTENANCE .....	16
TROUBLE SHOOTING .....	18
LUBRICATION SCHEDULE .....	19

## **PARTS BREAK DOWN AND ILLUSTRATIONS**

BED CHAIN DRIVE BREAK DOWN .....	20-21
2-BEATER ASSEMBLY BREAK DOWN .....	22-25
3-BEATER ASSEMBLY BREAK DOWN .....	26-29
TAIL PAN BREAK DOWN .....	30-31
HIGH SPEED HYDRAULIC SYSTEM BREAK DOWN .....	32-35
TRAILER BREAK DOWN .....	36-37
SLOP GATE BREAK DOWN .....	38-39
SILAGE HARDWARE KIT BREAK DOWN .....	40-41
U-JOINT ALIGNMENT .....	42
HYDRAULIC SCHEMATIC TRUCK TRAILER MOUNT .....	43
APPENDIX A SEALMASTER LUBRICATION .....	44

Revised 11/14/12

**NOTES**

## **INTRODUCTION**

Congratulations on your purchase of a MMI Manure Spreader. The MMI Spreader is the most advanced and durable Manure Spreader on the market. With proper maintenance and care the Spreader will give you many tons of trouble free operation.

**BEFORE OPERATION, PLEASE READ AND UNDERSTAND THIS INSTRUCTION MANUAL.**

## **REPAIR PARTS**

**[WWW.MIXERFEEDERS.COM](http://WWW.MIXERFEEDERS.COM)**

To make sure the proper parts are ordered, refer to exploded drawing in the back of this manual. When ordering parts please give serial number of the spreader and name of the part ordered.

**Record information pertaining to your spreader below.**

**Dealer:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Model:** \_\_\_\_\_

**Serial #:** \_\_\_\_\_

**Special Notes:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## NOTES

**THIS WARRANTY MUST BE REGISTERED-  
WITHIN 15 DAYS**

**"QUALITY CONTROL AND SAFETY  
CHECKLIST"**

This MMI warranty is valid only after the "QUALITY CONTROL AND SAFETY CHECK LIST" has been completed and verified by the MMI Dealer. Then signed by the Owner and the Dealer, and/or Owner and Dealer representative, AND the completed form is received by MMI.



www.mixerfeeders.com  
P.O. Box 544  
1110 N. Cameron Street  
Brush, CO 80723  
Phone: 970-842-5161  
Fax: 970-842-3111  
800-523-5614

Model \_\_\_\_\_

Serial No. \_\_\_\_\_ Delivery Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Owner \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip \_\_\_\_\_ County \_\_\_\_\_

Phone No. (\_\_\_\_) \_\_\_\_\_

Usage:  Commercial  Farmer  Other \_\_\_\_\_

Dealer \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip \_\_\_\_\_ County \_\_\_\_\_

Thereby acknowledge: (1) The completion of the "Quality Control and Safety Check List" and that I retained a copy thereof, together with the Owner's Manual (2) that I have read and understand the nature extent, limitations and exclusions of the manufacturer's warranty and; (3) that there were and are no other representations or warranties, either expressed or implied by anyone.

Owner \_\_\_\_\_

Dealer \_\_\_\_\_

- Check all structural welds for appearance.
- Check all bolted connections for tightness.
- Check drive enclosure for proper sprocket alignment and correct chain tension.
- Check bearings for alignment, tightness of locking collars and proper placement of veering stops.
- Check bearing for lubrication.
- Check side shields for proper latch tension and fit.
- Check main drive shaft for proper installation and clearance.
- Check U-Joints for timing and installation.
- Check Gear Boxes for installation and oil level.
- Check Frame/Box mounting point for proper installation.
- Check for trash or foreign articles inside box and beaters.

**RUN BOX AND CHECK THE FOLLOWING:**

- Check for vibration or run out of drive lines.
- Check for chain vibration.
- Check beaters for straightness and clearance.
- Check discharge chute actuation.
- Check external paint for appearance.
- Check for free operation of discharge conveyor.
- Operator has been instructed in operation, maintenance and safety precautions.

Instructions: Dealer fill out form and make 3 copies. Owner and Dealer sign all 3 copies (1) MMI, (1) Owner, and (1) Dealer.

# **MMI**

# **INTERNATIONAL**

## **LIMITED WARRANTY**

MMI Holdings, LLC, herein referred to as "MMI", warrants products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of 6 months or 1000 hours of usage, whichever comes first. This limited warranty is effective only if the equipment or apparatus is used as directed, is not subjected to misuse, negligence or accident, and is not altered, treated or repaired by someone other than MMI or its designee. Items not manufactured by MMI shall bear only the limited warranties offered by their respective manufacturers.

The exclusive remedy for breach of this warranty shall be to give MMI written notice thereof and to request a Returned Goods Authorization. Upon receipt of the Returned Goods Authorization, the buyer must return to the non-conforming material to MMI F.O.B. its plant within thirty days. Thereupon MMI at its own election shall repair or replace the same. No proximate, incidental, consequential or other damages shall be recoverable.

MMI shall not be liable for consequential damages or contingent liabilities including, but not limited to, loss of life, personal injury, loss of crops, loss due to fire or water property damage, and consequential trade or other commercial loss arising out of the failure of manufacturer's product.

Equipment and/or modifications to standard manufactured equipment on a "Made to Order" or "Custom" basis for a customer are not covered under this Limited Warranty. These are items not promoted, expressed or implied as options in the current design of standard manufactured equipment. Any damages resulting from the failure of functionality issues related to the design are the responsibility of the customer.

No designee or employee of MMI is authorized to extend, express, or imply additional warranty or incur any additional obligation on MMI's behalf.

MMI MAKES NO WARRANTIES OF FREEDOM FROM PATENT INFRINGEMENT, OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE OR OTHER LIKE OR DIFFERENT EXPRESS OR IMPLIED WARRANTIES EXCEPT AS MADE ABOVE.

MMI Holdings, LLC  
Brush, CO 80723

# SAFETY FIRST



## FARM AND INDUSTRIAL EQUIPMENT INSTITUTE SAFETY ALERT SYMBOL

This symbol is used preceding all  
**CAUTION** (a general safety reminder)  
**WARNING** (denotes a potential hazard)  
**DANGER** (denotes a potential injury) notices!

Most farm accidents, like industrial, home and highway accidents, are caused by the failure of some individuals to observe simple and fundamental safety rules or precautions. For this reason farm accidents, just as other types of accidents, can be prevented by recognizing the causes of accidents and doing something about them before an accident occurs.

Regardless of the care used in the design and construction of farm equipment, there are many points that cannot be completely safeguarded without interfering with accessibility and efficient operation.

A careful operator is the best insurance against an accident.

The complete observance of one simple rule would prevent many thousand serious injuries each year. That rule is:

**“NEVER ATTEMPT TO CLEAN, OIL OR ADJUST A MACHINE WHILE IN MOTIOM.”**

## NATIONAL SAFETY COUNCIL

BEFORE ATTEMPTING TO OPERATE YOUR NEW SPREADER BE SURE TO READ THIS OWNERS MANUAL AND FAMILIARIZE YOURSELF WITH THE MACHINE!! OBSERVE THE FOLLOWING PRECAUTIONS FOR SAFE OPERATION OF THIS MACHINE!!

- Keep Hands, Feet and Clothing away fro PTO Shaft!
- DO NOT climb on or enter machine while in operation
- DO NOT make high speed maneuvers with the machine
- Disengage PTO and remove key before servicing
- Keep ALL Shields in place
- DO NOT allow riders on outside of vehicle
- DO NOT attempt to clean, oil or adjust machine while in motion
- DO NOT exceed 1000 PTO Speed on trailer mounted units

NOTES

## GENERAL SPECIFICATIONS HIGH SPEED

**WIDTH:**

Inside Box .....	84"
Overall .....	96"

**LENGTH:**

HSXHD-14 .....	190"
HSXHD-15 .....	202"
HSXHD-17 .....	226"
HSXHD-18 .....	238"
HSXHD-19 .....	250"
HSXHD-20 .....	262"
HSXHD-21 .....	274"
HSXHD-22 .....	286"

**DEPTH:** ..... 38"

**HEIGHT:**

Spreader Only

Standard Head Board .....	82"
Low Curve Head Board .....	73"
High Curve Head Board .....	77"
Trailer Head Board w/o Slop Gate .....	62"
Trailer w/ Slop Gate .....	72"
Trailer 3-Beater .....	69"

**CAPACITY:**

HSXHD-14 .....	420 cu ft	15.5 cu yd	338 bu
HSXHD-15 .....	450 cu ft	16.7 cu yd	362 bu
HSXHD-17 .....	510 cu ft	18.8 cu yd	410 bu
HSXHD-18 .....	540 cu ft	20.0 cu yd	435 bu
HSXHD-19 .....	570 cu ft	21.1 cu yd	458 bu
HSXHD-20 .....	600 cu ft	22.2 cu yd	482 bu
HSXHD-21 .....	630 cu ft	23.3 cu yd	506 bu
HSXHD-22 .....	660 cu ft	24.4 cu yd	530 bu

**WEIGHT:**

HSXHD-14 .....	6500 lb
HSXHD-15 .....	6800 lb
HSXHD-17 .....	7100 lb
HSXHD-18 .....	7500 lb
HSXHD-19 .....	7800 lb
HSXHD-20 .....	8200 lb
HSXHD-21 .....	8500 lb
HSXHD-22 .....	8900 lb

**FLOOR:** ..... 10 Gauge Steel

**SIDE:** ..... 10 Gauge Steel

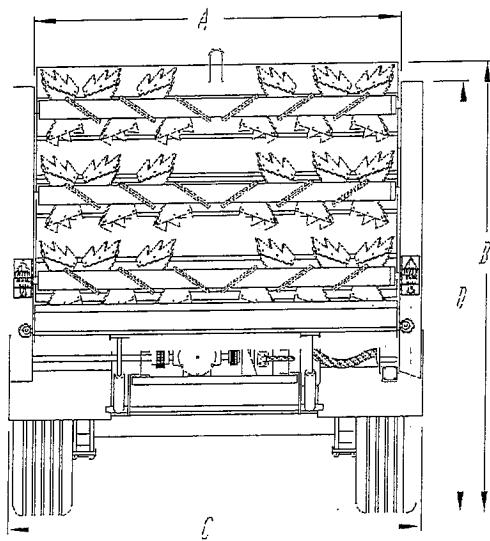
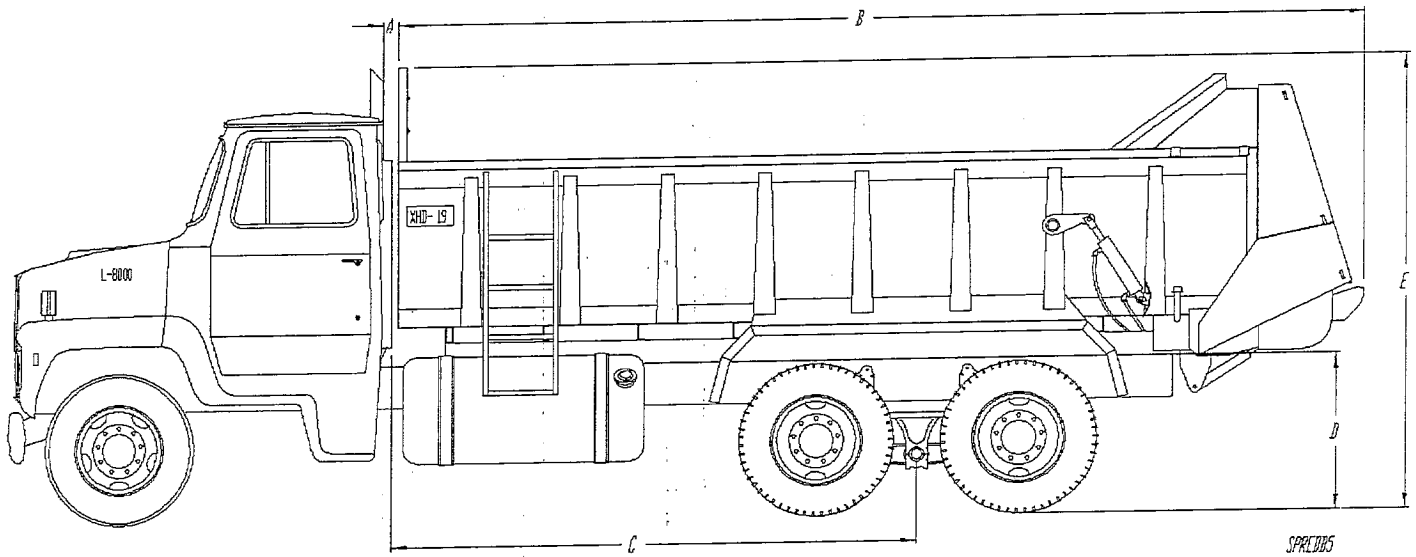
**FRONT:** ..... 10 Gauge Steel

**BEARINGS:** ..... All Bearings Greasable

**DRIVES:** ..... High Speed Reduction in Precision Gear Boxes  
Roller Chain and Hardened Sprockets

## TRUCK SPECIFICATIONS

Ref	Dimension Description	HSXHD-14	HSXHD-15	HSXHD-17	HSXHD-18	HSXHD-19	HSXHD-20	HSXHD-21	HSXHD-22
A	Cab-Box Clearance	4"	4"	4"	4"	4"	4"	4"	4"
B	Spreader length	190"	202"	226"	238"	250"	262"	274"	286"
C	Cab-Axle Length Min	108" CA	120" CA	120" CT	130" CT	138" CT	144" CT	150" CT	156" CT
D	Frame height	40"	40"	40"	40"	40"	40"	40"	40"
E	Over All Height	122"	122"	122"	122"	122"	122"	122"	122"
F	Side Height	93"	93"	93"	93"	93"	93"	93"	93"



Ref.	Dimension Description	HSXHD-14 thru 22
A	Inside Box Wide	84"
B	Height (w/Slop Gate)	112"
C	Height (3-Beater)	109"
D	Over All Width	96"

## TRUCK SPECIFICATIONS

### HSXHD-14 & 15:

Minimum GVWR .....	30,000 lb
Minimum GVWR .....	30,000 lb
Rear Axle .....	21,000 lb
Front Axle .....	12,000 lb
Cab to Axle .....	120" CA
Minimum Engine .....	210 HP

### HSXHD-17 thru 22:

Minimum GVWR .....	52,000 lb
Rear Axle .....	40,000 lb
Front Axle .....	12,000 lb

Refer to box weight and truck weight to determine appropriate suspension capacity.

Air-Ride Suspension may be used however spring ride will offer increased stability and control.

Cab to Trunnion	HSXHD-17 .....	120" CT
	HSXHD-18 .....	130" CT
	HSXHD-19 .....	136" CT
	HSXHD-20 .....	144" CT
	HSXHD-21 .....	150" CT
	HSXHD-22 .....	156" CT

MINIMUM LENGTH ADDITIONAL 6" RECOMMENDED

Minimum Engine .....	300 HP
----------------------	--------

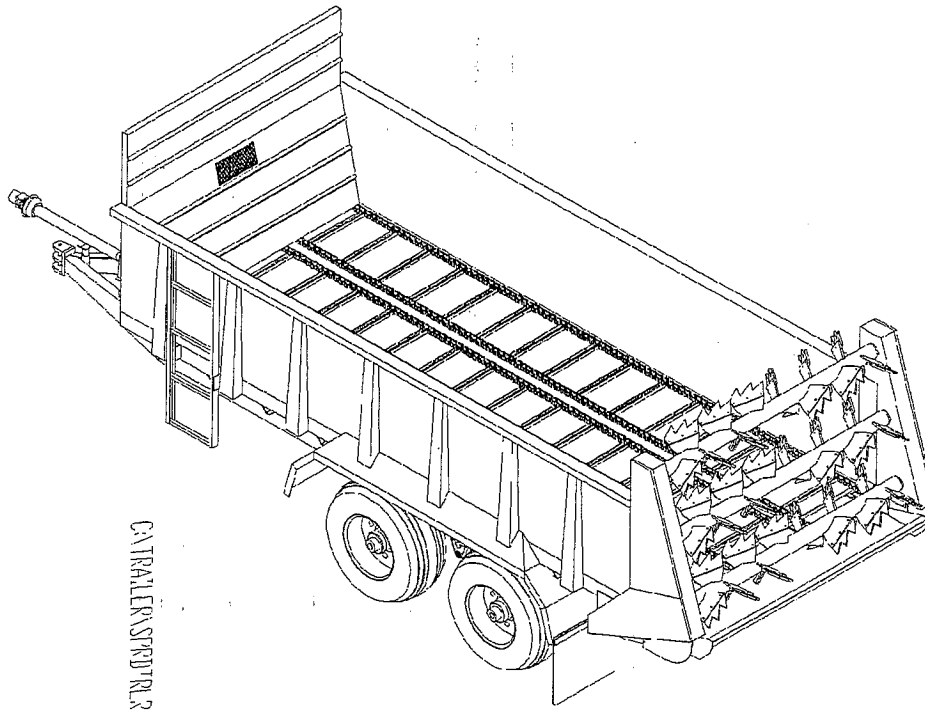
## TRUCK MOUNT

### REVOLUTION PER MINUTE

TRUCK RPM .....	1500 RPM
90% PTO .....	1350 RPM
BOTTOM BEATER .....	375 RPM
2ND BEATER .....	300 RPM
3RD BEATER .....	240 RPM
BED CHAIN .....	0 TO 14 FT / MIN

## TRAILER SPECIFICATIONS

<b>WEIGHT:</b>	
Trailer Only—Single Axle .....	3,200 lb
Trailer Only—Tandem Axle .....	4,000 lb
<b>AXLE:</b>	
Single Axle .....	23,000 lb. W/ Sealco Self Oiling Hubs
Tandem Axle .....	46,000 lb. W/ Sealco Self Oiling Hubs
<b>SUSPENSION:</b>	
Single Axle .....	Hutch Single Axle W/ Multi-Leaf Springs
Tandem Axle .....	Hutch Tandem Axle W/ Multi-Leaf Springs
<b>TIRES:</b> .....	40 x 14.5 x 19 Floatation
<b>PTO SPEED REQUIREMENT:</b> .....	1,000 RPM Only
<b>PTO HORSEPOWER REQUIREMENT (Minimum):</b>	
HSXHD-14 & 15 .....	80 PTO HP
HXSHD-17 THRU 22 .....	100 PTO HP



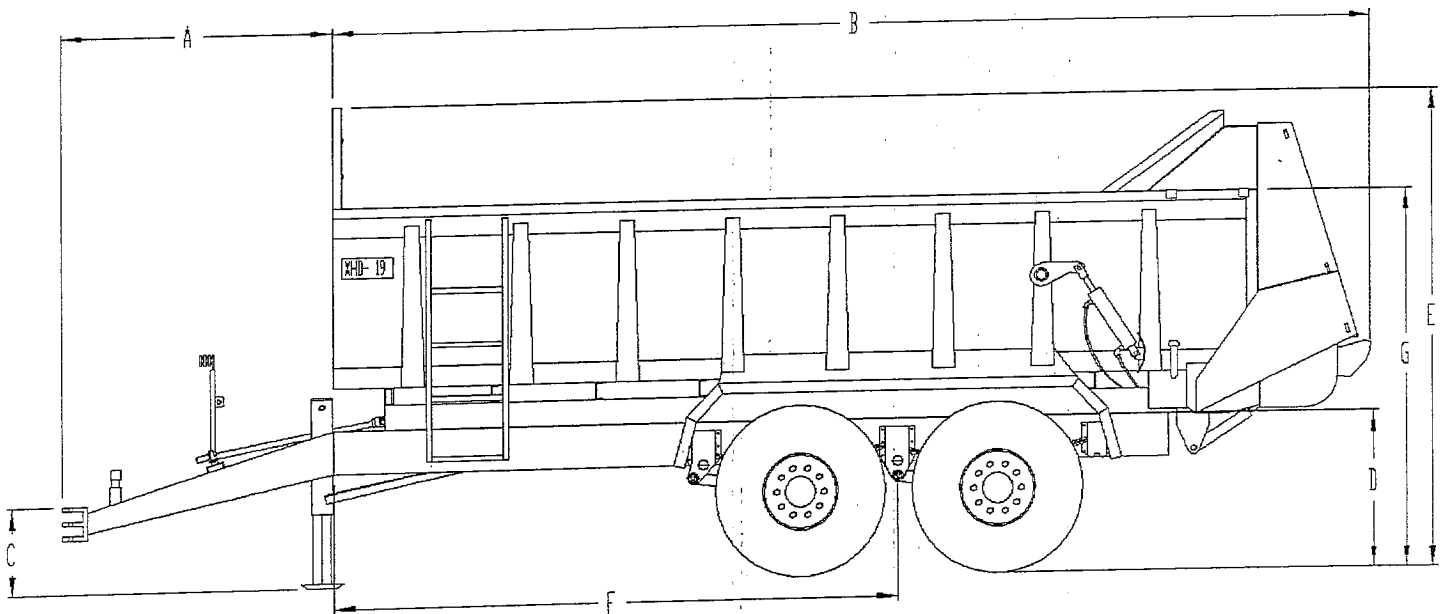
### TRAILER MOUNT

#### REVOLUTION PER MINUTE

TRACTOR PTO .....	1,000 RPM
A-76 (1:1) .....	1,000 RPM
BOTTOM BEATER .....	417 RPM
2ND BEATER .....	334 RPM
3RD BEATER .....	267 RPM
BED CHAIN .....	0 TO 14 FT / MIN

## TRAILER SPECIFICATIONS

Ref.	Dimension Description	HSXHD-14	HSXHD-15	HXSHD-17	HXSHD-18	HXSHD-19	HXSHD-20	HXSHD-21	HXSHD-22
A	Tongue Length	65"	65"	65"	65"	65"	65"	65"	65"
B	Spreader Length	190"	202"	226"	238"	250"	262"	274"	286"
C	Tongue Height	22'	22"	22"	22"	22"	22"	22"	22"
D	Frame Height	38"	38"	38"	38"	38"	38"	38"	38"
E	Over All Height	120"	120"	120"	120"	120"	120"	120"	120"
F	Front-Axle Length	74" CA	86" CA	110" CT	122" CT	134' CT	146" CT	158" CT	170" CT
G	Side Height	91"	91"	91"	91"	91"	91"	91"	91"



Ref.	Dimension Description	HSXHD-14 thru 22
A	Inside Box Width	84"
B	Height (w/ Stop Gate)	110"
C	Over All Width	96"
D	Height (3-Beater)	107"

## PRE-OPERATION INSTRUCTION

### GENERAL:

Check Hydraulic Fluid Level. (See Illustration #1)

Check For Obstruction In Bed Chain And Beaters.

Remove Any Build Up Between Chain And Sides. Also Keep Beaters Clean And Free Of Wire And String.

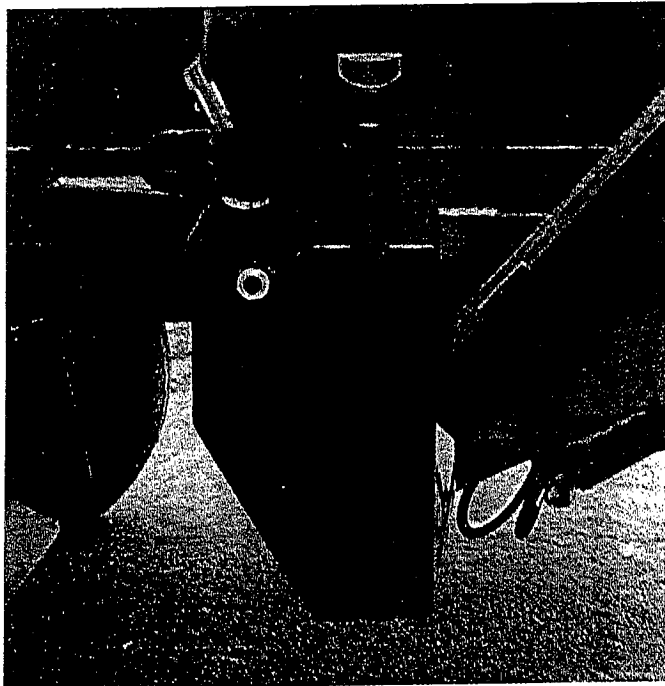
Verify All Guards And Shields Are Secure For Operation.

Check For Leaks On Hoses, Cylinders, Gearboxes And Motors.

Test Operation Of All Spreader Functions Prior To Loading Box.

Verified Beater Rotation Clockwise From Rear Left.

**Illustration #1**

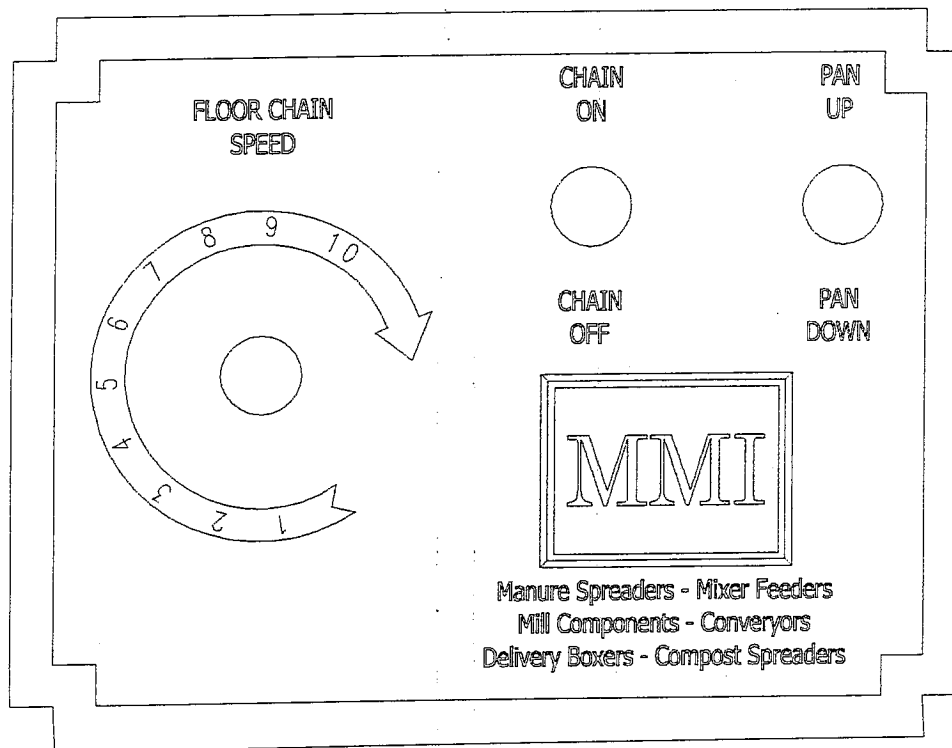


## OPERATION—ELECTRONIC

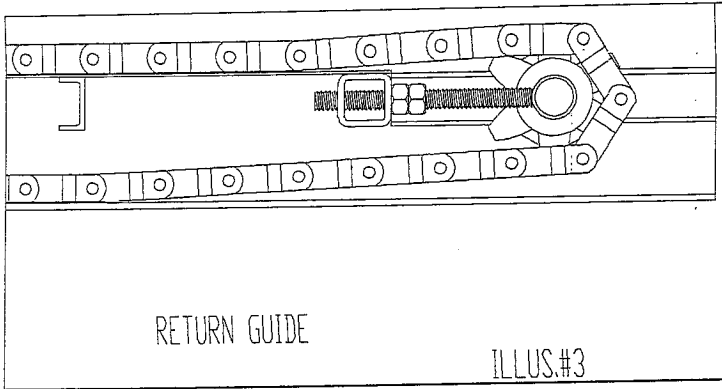
1. Make All Pre-Operation Checks.
2. Load Spreader  
**Do Not Load Against Beaters As PTO Damage May Occur.**
3. Position Truck In Desired Location To Be Unloaded.
4. Set Floor Speed To Percent Of Flow You Desire.
5. Engage Truck Clutch And PTO And Verified Beaters Are Turning.  
**Hot Shift PTO May Be Engaged Without Use Of Truck Clutch At Idle Speed Only.**
6. Lower Tail Pan With Switch Marked (Pan Up, Pan Down).
7. Start Truck Forward And At The Same Time Switch To Chain On.  
**If Beaters Become Plugged Disengage PTO Immediately To Prevent PTO Damage.**
8. Adjust Floor Chain Speed Dial For Desired Floor Chain Speed.

Because Of Transmission And PTO Variations, Operator Will Have To Determine Setting For His Truck To Give Proper Application Rate.

**Illustration #2**



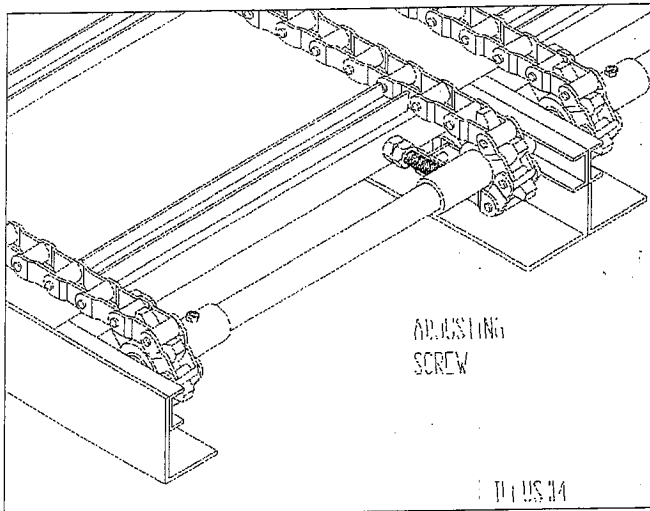
## GENERAL MAINTENANCE



Check bed chain tightness and adjust as required. Adjustment is necessary when bed chain touches the return guides within 18" of the front idler sprockets. (See illustration #3)

Check to see that bed chain is pulling straight. Adjust by using screws shown in (illustration #4).

Loosen nut located on front sprocket shaft for adjusting chain tightness. (See illustration #5).

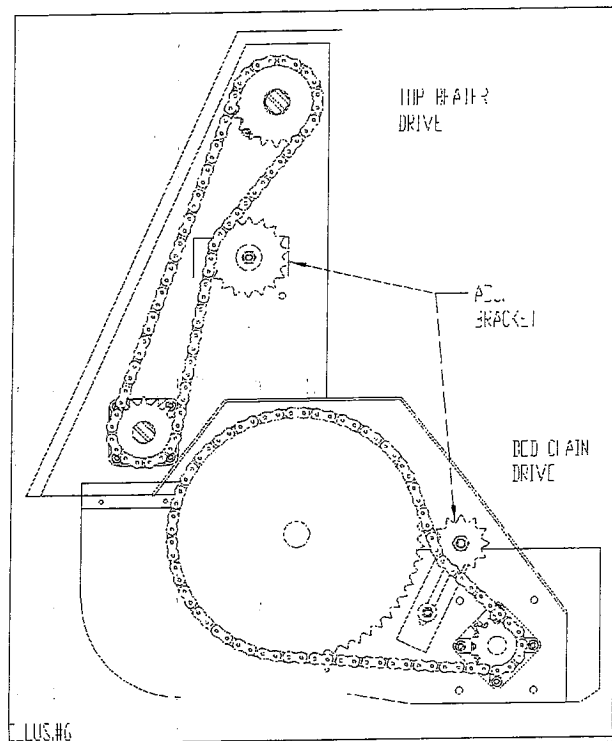
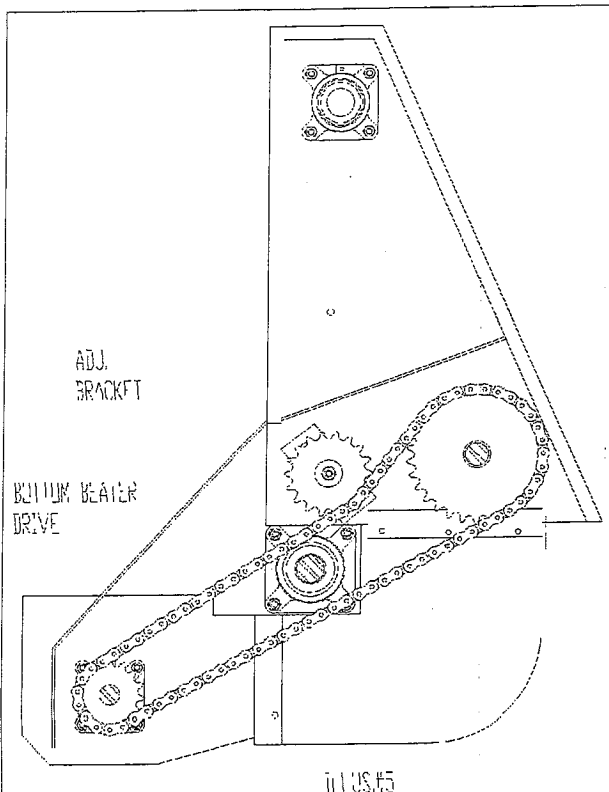


Check tightness of drive chains. Adjust as required using adjusting brackets. (See illustration #6).

Tighten all loose nuts and bolts.

Check to see that all guards and shields are replaced and fitting properly.

Improper chain adjustment will result in excess wear and reduced chain service life.



## NOTES

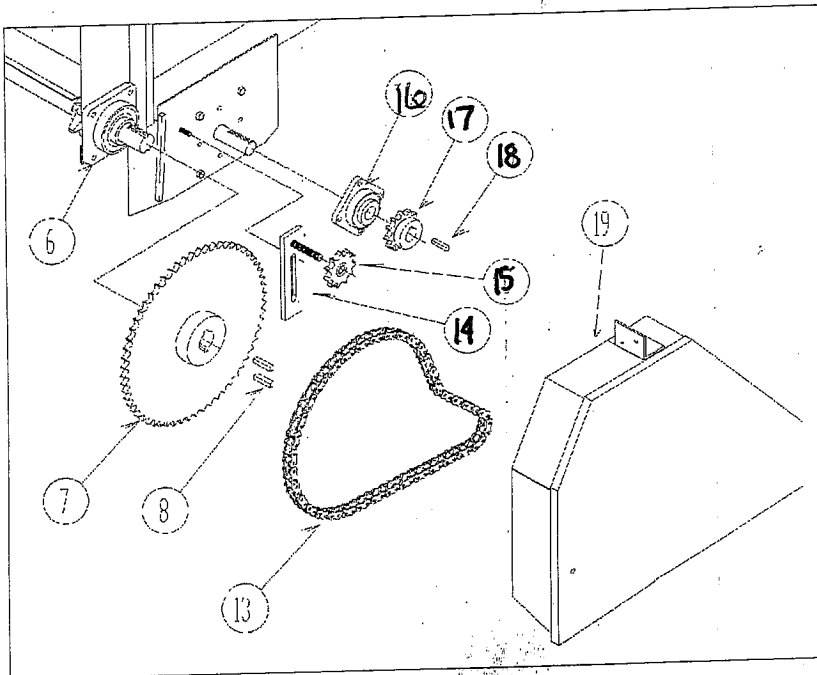
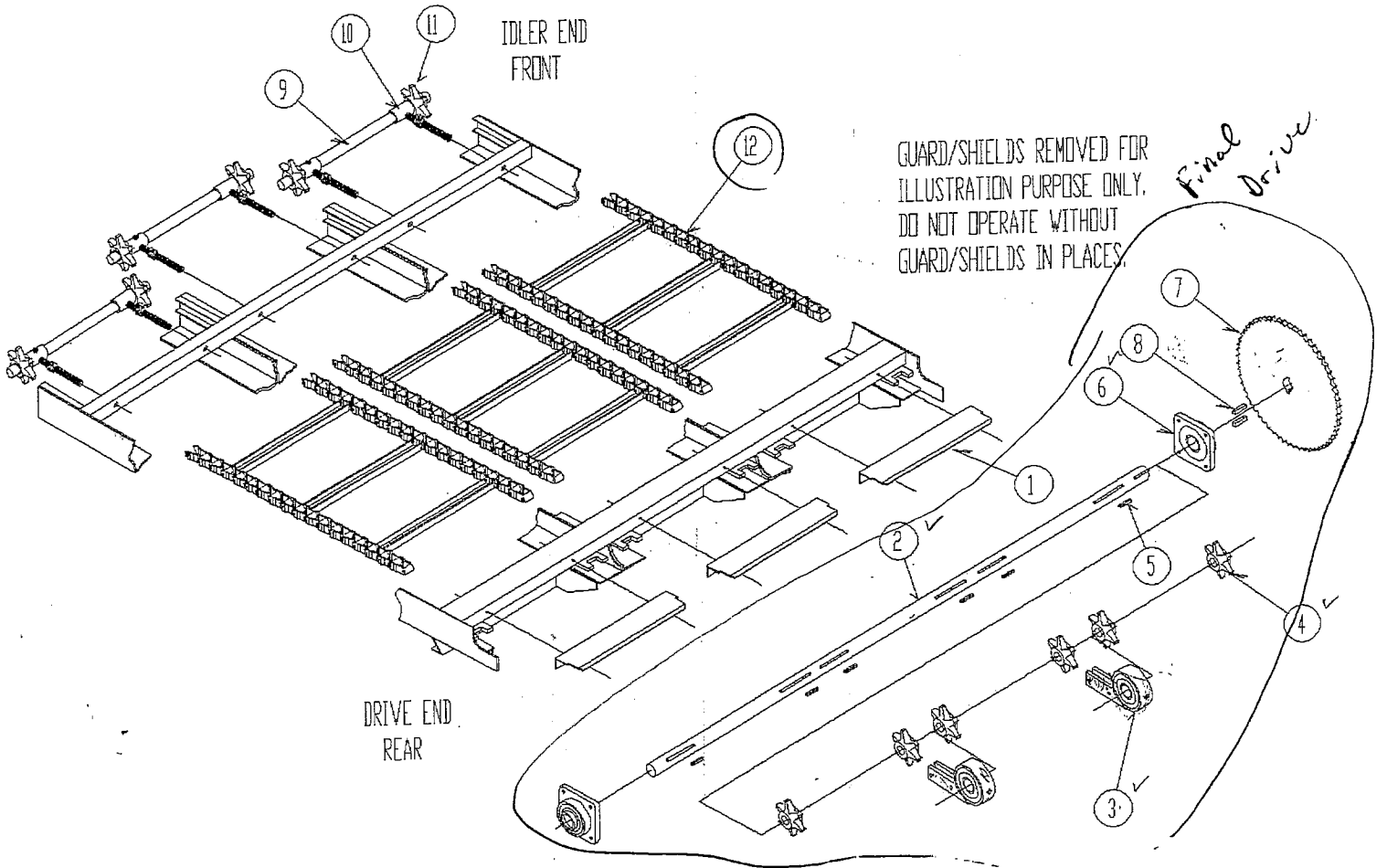
## TROUBLE SHOOTING

SYMPTON	POSSIBLE CAUSE	TEST METHOD	REMEDY
<b>Box Won't Operate</b>	<ol style="list-style-type: none"> <li>1. Truck PTO Not Engaged</li> <li>2. Truck PTO Inoperable</li> <li>3. Gearbox Malfunction</li> <li>4. Electrical Connections Faulty</li> <li>5. Hydraulic System Faulty</li> </ol>	<ol style="list-style-type: none"> <li>1. Visual Inspection</li> <li>2. Visual Inspection</li> <li>3. Check For Gearbox Output</li> <li>4. Test Electrical Connections &amp; Voltage</li> <li>5. Check Hydraulic Fluid Level</li> </ol>	<ol style="list-style-type: none"> <li>1. Engage PTO</li> <li>2. Repair Or Replace PTO</li> <li>3. Repair Gearbox</li> <li>4. Pressure Test Hydraulic System</li> </ol>
<b>Bed Chain Won't Move</b>	<ol style="list-style-type: none"> <li>1. Bed Chain Froze Down In Cold Weather Or Wedged</li> <li>2. Excessive Build Up On Return Rails</li> <li>3. Gearbox Malfunction</li> <li>4. Flow Control Faulty</li> <li>5. Hydraulic System Faulty</li> </ol>	<ol style="list-style-type: none"> <li>1. Visual Inspection</li> <li>2. Visual Inspection</li> <li>3. Visual Inspection</li> <li>4. Check For Output</li> <li>5. Check Electrical Connections</li> <li>6. Check For Obstructions In Hydraulic Lines, Operation Of Pump &amp; Motor, Hydraulic Pressure</li> </ol>	<ol style="list-style-type: none"> <li>1. Free Bed Chain</li> <li>2. Remove Excess Material</li> <li>3. Replace Bearing</li> <li>4. Gearbox Repair</li> <li>5. Repair Electrical Connections</li> <li>6. Clear Hydraulic Lines, Repair Or Replace Pump Or Motor, Adjust Pressure</li> </ol>
<b>Excessive Power Requirement On Normal Loads</b>	<ol style="list-style-type: none"> <li>1. Beaters Plugged</li> <li>2. Beater Tips Worn Out</li> <li>3. Bed Chain Feeding Too Fast</li> <li>4. Worn Bearing In Gear Drives</li> </ol>	<ol style="list-style-type: none"> <li>1. Visual Inspection</li> <li>2. Visual Inspection</li> <li>3. Visual Inspection</li> <li>4. Check Gear Drives</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove Jam</li> <li>2. Replace Beater Tips</li> <li>3. Slow Bed Chain</li> <li>4. Replace Bearing</li> </ol>
<b>Excessive Vibration &amp; Unusual Noise</b>	<ol style="list-style-type: none"> <li>1. PTO Bolts Loose</li> <li>2. U-Joint Out Or U-Joint Are Out Of Alignment</li> <li>3. Bent Driveline</li> <li>4. Gearbox Bearing</li> <li>5. Bent Beater Tube</li> </ol>	<ol style="list-style-type: none"> <li>1. Visual Inspection</li> <li>2. Visual Inspection</li> <li>3. Visual Inspection</li> <li>4. Visual Inspection</li> <li>5. Visual Inspection</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten Bolts</li> <li>2. Realign U-Joints ( See Drawing Page ?? )</li> <li>3. Straightening Or Replace Driveline</li> <li>4. Replace Bearing</li> <li>5. Straighten Or Replace Beater Tube</li> </ol>

## LUBRICATION SCHEDULE

ITEM	LUBRICANT	INTERVAL
U-Joint Drivelines	Standard Gun Grease	Daily Or Every 12 Hours Of Operation. One Or Two Pump Of Hand Grease Gun.
All Bearings	Standard Gun Grease	Final Drive Center Bearings Every 60 Hours Of Operation. One Or Two Pumps.  Sealmaster Bearings See Appendix A, Page ??
Gearbox	ISO 90 Gear Lube	Check Periodically.
Hydraulic Fluid	ISO 46 Hydraulic Oil	Check Periodically.
Hydraulic Filter	Change Element	Every 150—200 Hours Of Operation.
Beater Chain	Motor Oil	Brush Lightly Every 10 Hours Of Operation.
Bed Chain	Motor Oil	Brush Lightly Every 20 Hours Of Operation.

# BED CHAIN BREAK DOWN



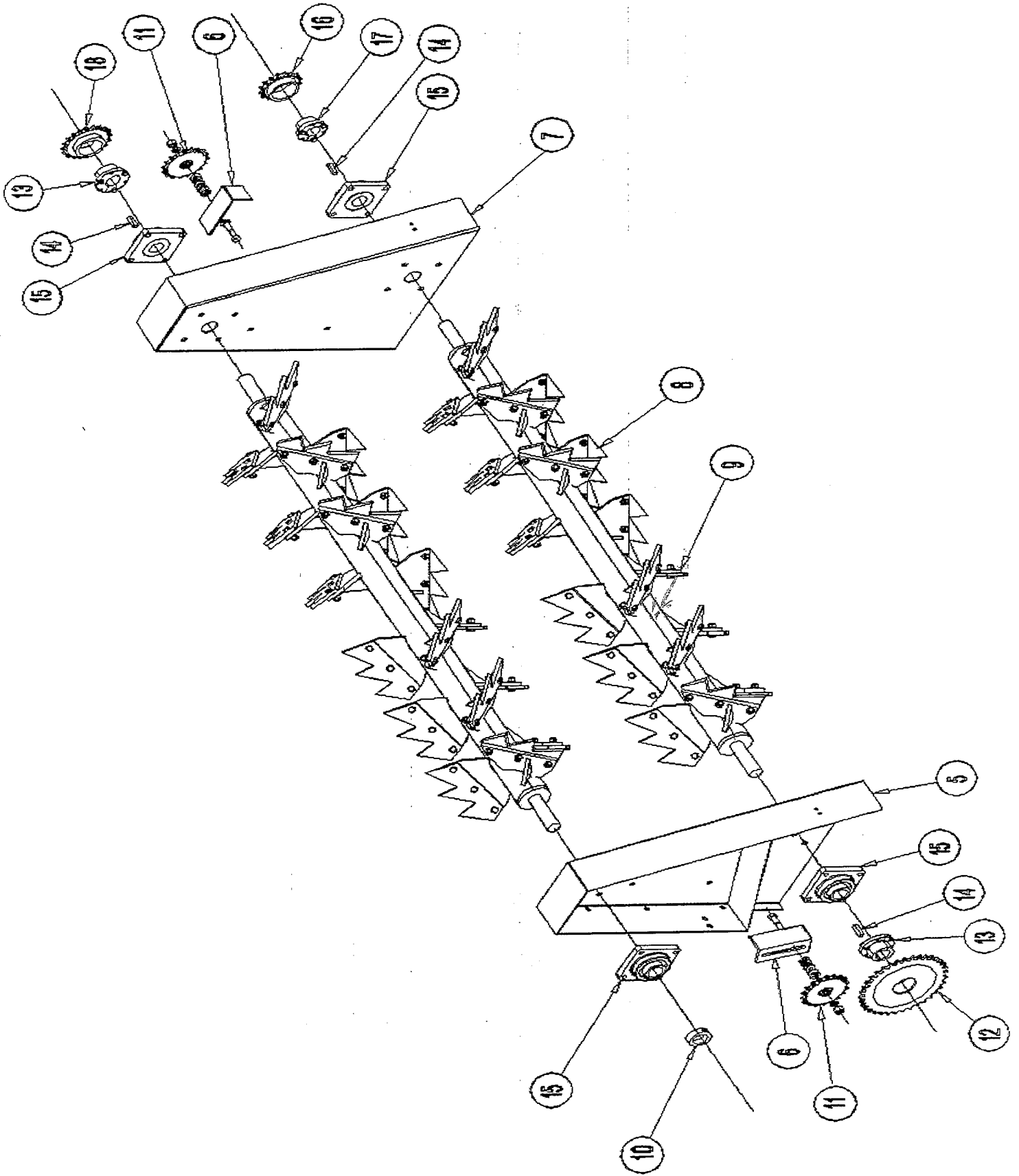
## BED CHAIN BREAK DOWN

Alternate #5  
10233025  
10233026

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	10213020	Floor Extension 2 Chain .....	2
	10213030	Floor Extension 3 Chain .....	3
2	10214020	Final Drive Shaft 2 Chain .....	1
	10214030	Final Drive Shaft 3 Chain .....	1
3	10220000B	Center Bearing Assembly w/Hardware.....	1 or 2
	10230000	Center Bearing Cage Assembly .....	1
	10310320	Bearing Insert Only <b>CU332</b>	
	10222000	4" Dust Cover .....	1
	10223000	3" Dust Cover .....	1
4	10667200	Sprocket D667 2" Bore .....	4 or 6
5	5/16 X 2 Key	Key Stock, 5/16" X 2" .....	4 or 6
6	10310330	2" Flange Bearing <b>F3U232N</b> .....	2
7	10516020	Sprocket 2" Bore .....	1
8	1/2 X 2 Key	Key Stock, 1/2" X 2" .....	2
9	10311020	2 Chain Idler Shaft .....	2
	10311030	3 Chain Idler Shaft .....	3
10	10320000	Bed Chain Adjusting Screw.....	4 or 6
	10320100	Bed Chain Adjusting (No Set Screw) .....	4 or 6
11	10667171	Sprocket w/ Bronze Bushing .....	4 or 6
	10313100	Bushing Only .....	
12	10950020	Bed Chain Assembly ( 2 Chain ) .....	2
	10955020	Repair Chain Slat ( 2 Chain ) .....	2
	10950030	Bed Chain Assembly ( 3 Chain ) .....	3
	10955030	Repair Chain Slat ( 3 Chain ) .....	3
13	10380000	Chain .....	1
14	10975000	Idler Bracket .....	1
15	10510120	Idler Sprocket .....	1
16	10310240	Flange Bearing .....	1
17	10510257	Sprocket .....	1
18	3/8 X 1-5/8 Key	Key Stock, 3/8" X 1-5/8" .....	1
19	10651050	Lower Right Hand Side Shield .....	1
*20	10212000	Center Chain Scraper .....	4
*21	10211000	Outside Chain Scraper .....	2

Note: \* Not Shown

2 BEATER BREAK DOWN—2" SHAFT

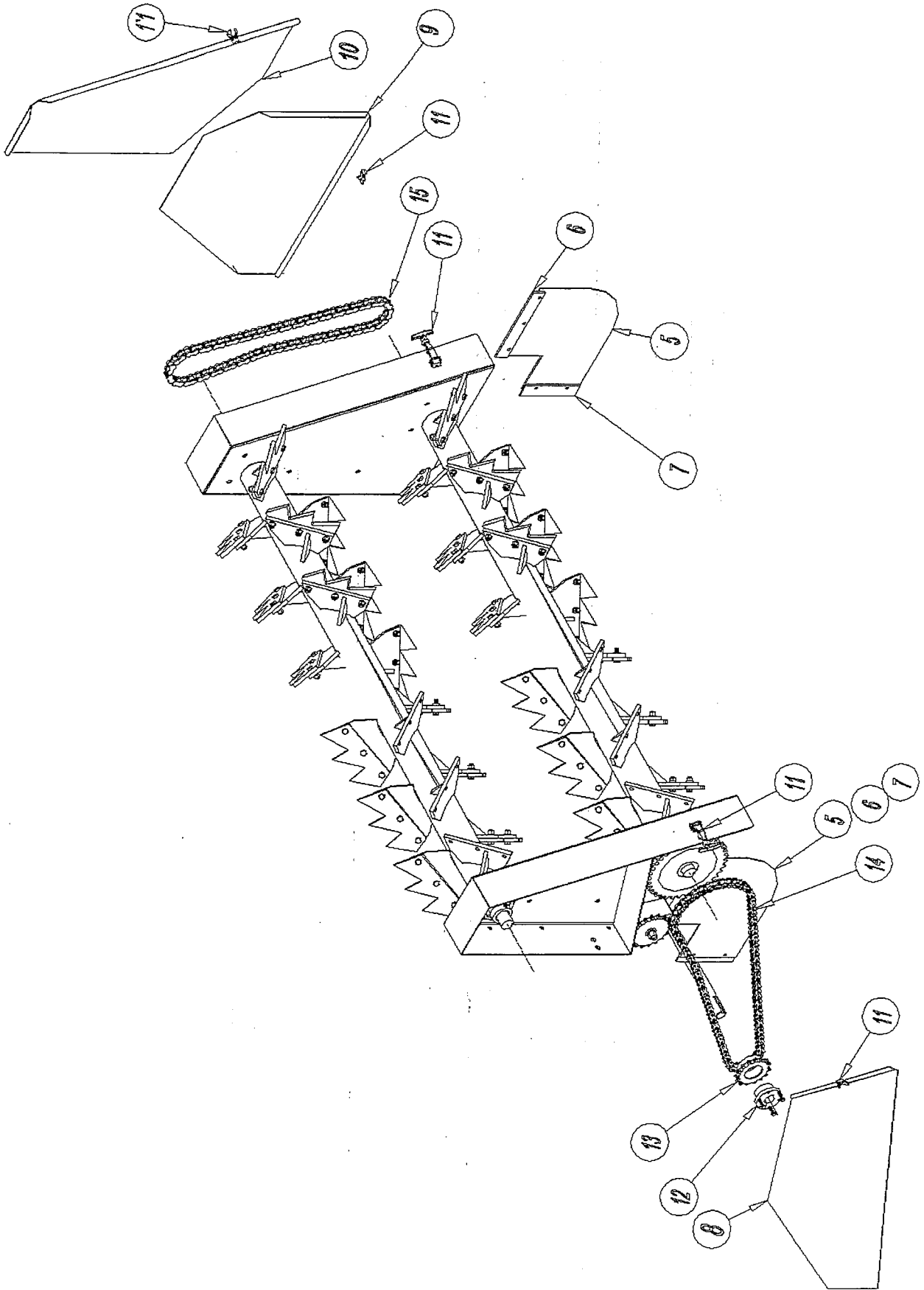


## 2 BEATER BREAK DOWN—2" SHAFT

ITEM NO.	PART NO.	DESCRIPTION	QTY.
*1	1/2" Lock	1/2" Lock Washer .....	124
*2	1/2NC Nut	1/2"NC Hex Nut .....	124
*3	1/2NC X 1-1/2 Hex	1/2"NC X 1-1/2" Hex Head Bolt .....	16
*4	1/2NC X 1-3/4 Hex	1/2"NC X 1-3/4" Hex Head Bolt .....	108
5	10610120	2 Beater Left Hand Plate 2" Shaft .....	1
6	10612000	3" X 3" X 7" Idler Mount Angle .....	2
7	10620120	2 Beater Right Hand Plate 2" Shaft .....	1
8	10636000	Beater Tips .....	36
9.	<del>1067000T</del> AP-205-00143	Beater Assembly W/O Tips 2" Shaft .....	2 -
10	152-3200	2" Set Collar .....	1
11	10511800	Idler Sprocket .....	2
		5/8"NC X 3" Carriage Bolt .....	1
		5/8" Flat Washer .....	3
		5/8" Lock Washer .....	1
		5/8" NC Hex Nut .....	1
12	10510360	Sprocket .....	1
13	10320020	Bushing 1/2" Key .....	2
14	Key 1/2 X 2	1/2" X 2" Key .....	3
15	10310330	2" Flange Bearing .....	4
16	10510160	Sprocket .....	1
17	10330020	Bushing 1/2" Key .....	1
18	10512000	Sprocket .....	1

Note:  
\*Not Shown

**2 BEATER BREAK DOWN—2" SHAFT**

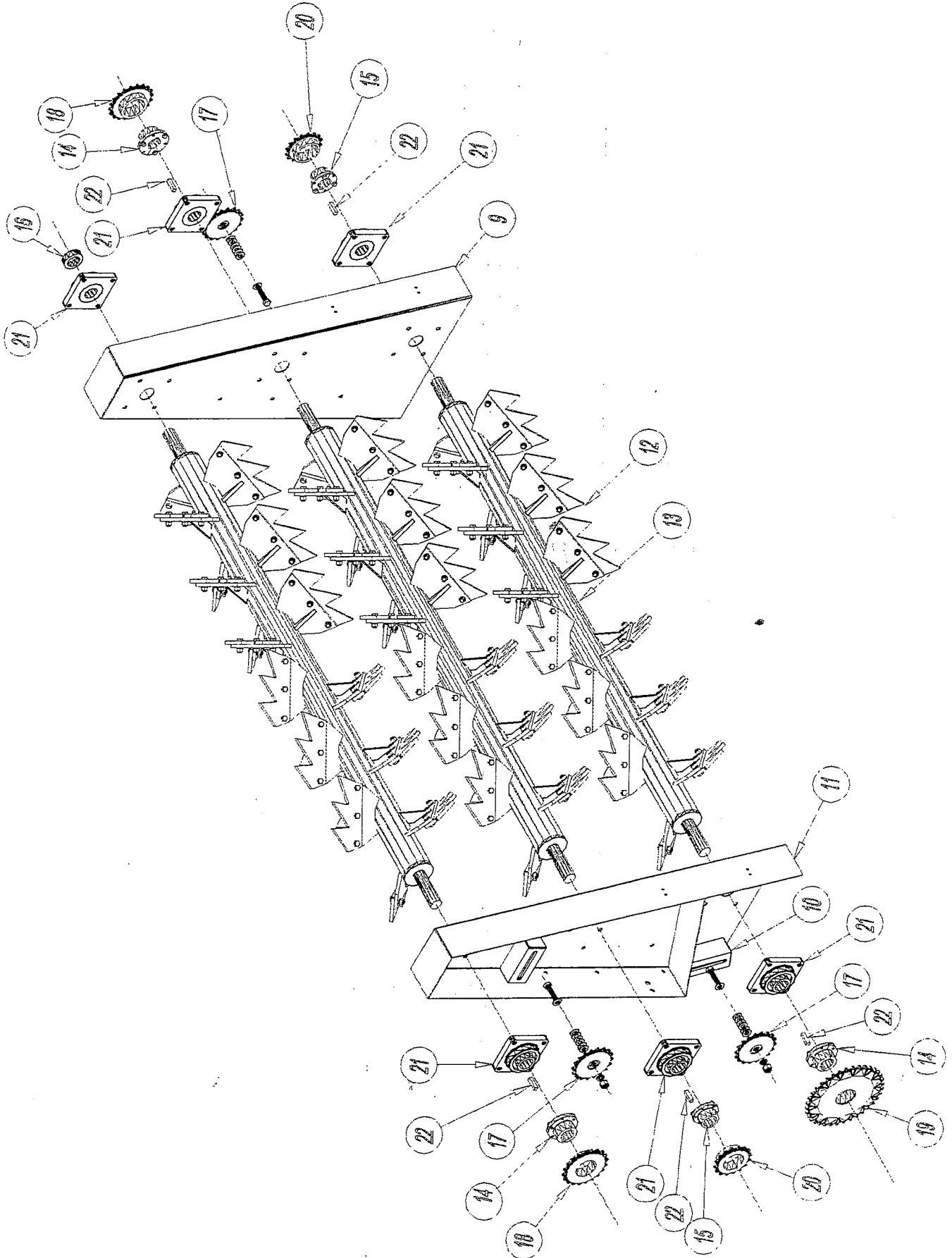


## 2 BEATER BREAK DOWN—2" SHAFT

ITEM NO.	PART NO.	DESCRIPTION	QTY.
*1	1/2 Lock	1/2" Lock Washer .....	10
*2	1/2NC Nut	1/2"NC Hex Nut .....	10
*3	1/2NC X 1-1/4 Hex	1/2"NC X 1-1/4" Hex Head Bolt .....	6
*4	1/2NC X 1 Hex	1/2"NC X 1" Hex Head Bolt .....	4
5	10613000	Drive End Lower Side Plate (Left or Right) .....	2
6	10614000	Drive End Lower Side Plate Mount .....	2
7	10615000	Drive End Lower Side Plate Mount .....	2
8	10641220	2 Beater Left Hand Shield Assembly .....	1
9	10651050	2 Beater Right Hand Shield Assembly .....	1
10	10659220	2 Beater Top Right Hand Shield .....	1
11	1685A26	Rubber Strap .....	2
12	10330120	1-1/2" Flange Hub Adapter .....	1
13	10510110	Sprocket .....	1
14	10680100	Chain .....	6.08 Ft
15	10680100	Chain .....	7.25 Ft

NOTE:  
\* Not Shown

### 3 BEATER BREAK DOWN—2" SHAFT

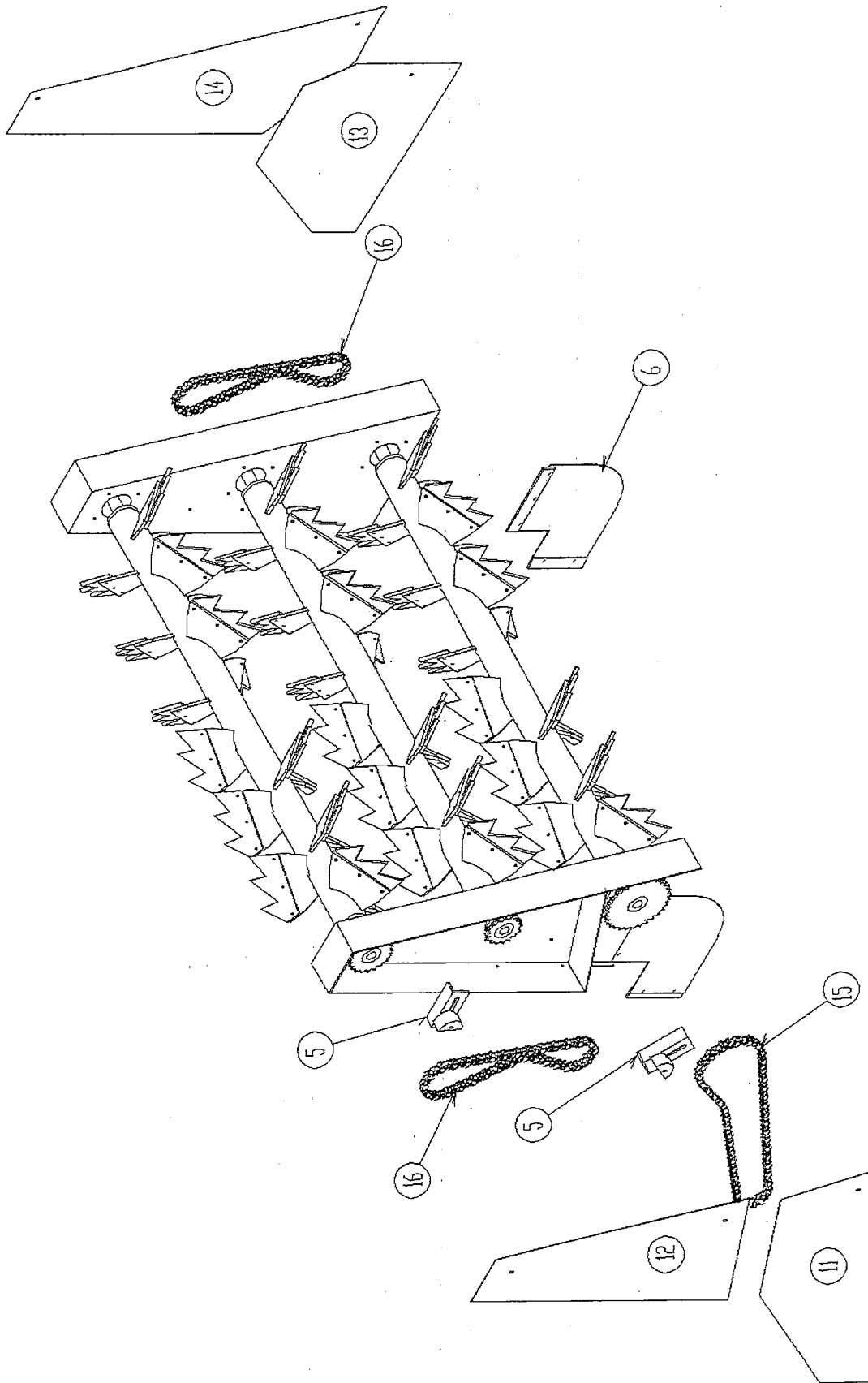


### 3 BEATER BREAK DOWN-2" SHAFT

ITEM NO.	PART NO.	DESCRIPTION	QTY.
*1	1/2NC X 1-3/4 Hex	1/2"NC X 1-3/4" Hex Bolt .....	138
*2	1/2 Lock Washer	1/2" Lock Washer .....	138
*3	1/2NC Nut	1/2"NC Hex Nut .....	138
*4	5/8NC X 2 Hex	5/8"NC X 2" Hex Head Bolt .....	24
*5	5/8NC X 3 Carriage	5/8"NC X 3" Carriage Bolt .....	3
*6	5/8 Flat Washer	5/8" Flat Washer .....	14
*7	5/8 Lock Washer	5/8" Lock Washer .....	27
*8	5/8NC Nut	5/8"NC Hex Nut .....	27
9	10680038	3 Beater Left Hand Plate w/2" Beater Shaft .....	1
10	10612000	3" X 3" X 7" Idler Sprocket Mount .....	3
11	10620131	3 Beater Right Hand Plate w/2" Beater Shaft .....	1
12	10636000	Beater Tip .....	54
13	10670001	Beater Assembly w/o Tips, 2" Shaft .....	3
14	10330020	Bushing 1/2" Key .....	2
15	10320020	Bushing 1/2" Key .....	3
16	152-3200	2" Set Collar .....	1
17	10511800	Idler Sprocket .....	3
18	10512000	Sprocket .....	2
19	10510360	Sprocket .....	1
20	10510160	Sprocket .....	2
21	10310330	Flange Bearing .....	6
22	Key 1/2 X 2	1/2" X 2" Key .....	5

Note:  
\* Not Shown

**3 BEATER BREAK DOWN—2" SHAFT**



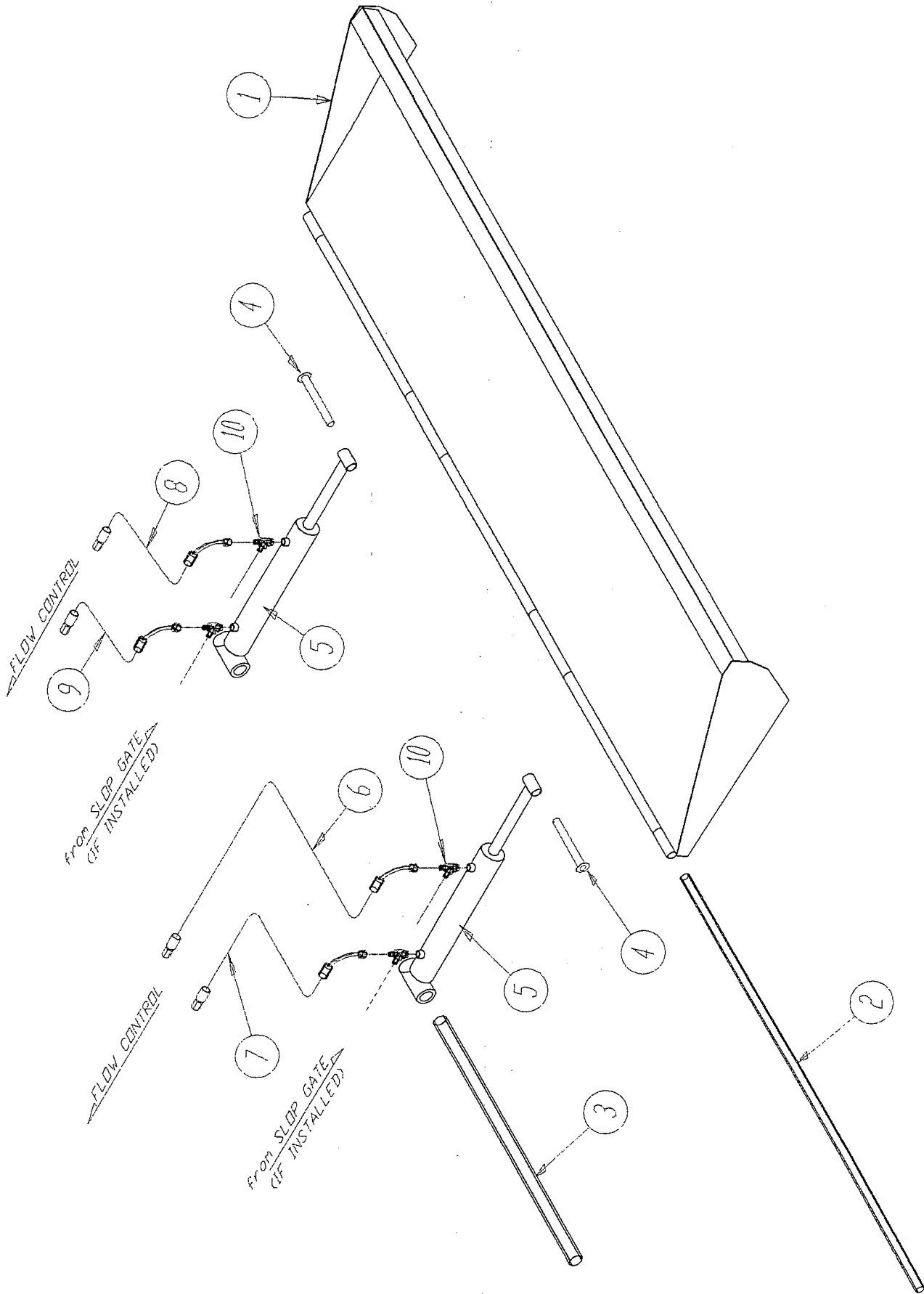
### 3 BEATER BREAK DOWN-2" SHAFT

ITEM NO.	PART NO.	DESCRIPTION	QTY.
*1	1/2NC X 1 Hex	1/2"NC X 1" Hex Bolt .....	6
*2	1/2NC X 1-1/4 Hex	1/2"NC X 1-1/4" Hex Head Bolt .....	6
*3	1/2 Lock Washer	1/2" Lock Washer .....	12
*4	1/2NC Nut	1/2"NC Hex Nut .....	12
5	10612000	3" X 3" X 7" Idler Sprocket Mount .....	3
6	10613000	Drive End Lower Side Plate (Left or Right) .....	2
*7	10310240	Flange Bearing .....	1
*8	10330120	Bushing 3/8" Key .....	1
*9	Key 3/8 X 3	3/8" X 3" Key .....	1
*10	10510110	Sprocket .....	1
11	10641220	3 Beater Left Hand Lower Shield .....	1
12	10647050	3 Beater Left Hand Top Shield .....	1
13	10651050	3 Beater Right Hand Lower Shield .....	1
14	10651040	3 Beater Right Hand Top Shield .....	1
15	10380000	Roller Chain Bottom Beater Drive (Left Side) .....	1 Box
16	10380000	Roller Chain Middle & Top Beater Drive .....	2 Boxes

Note:

\*Not Shown

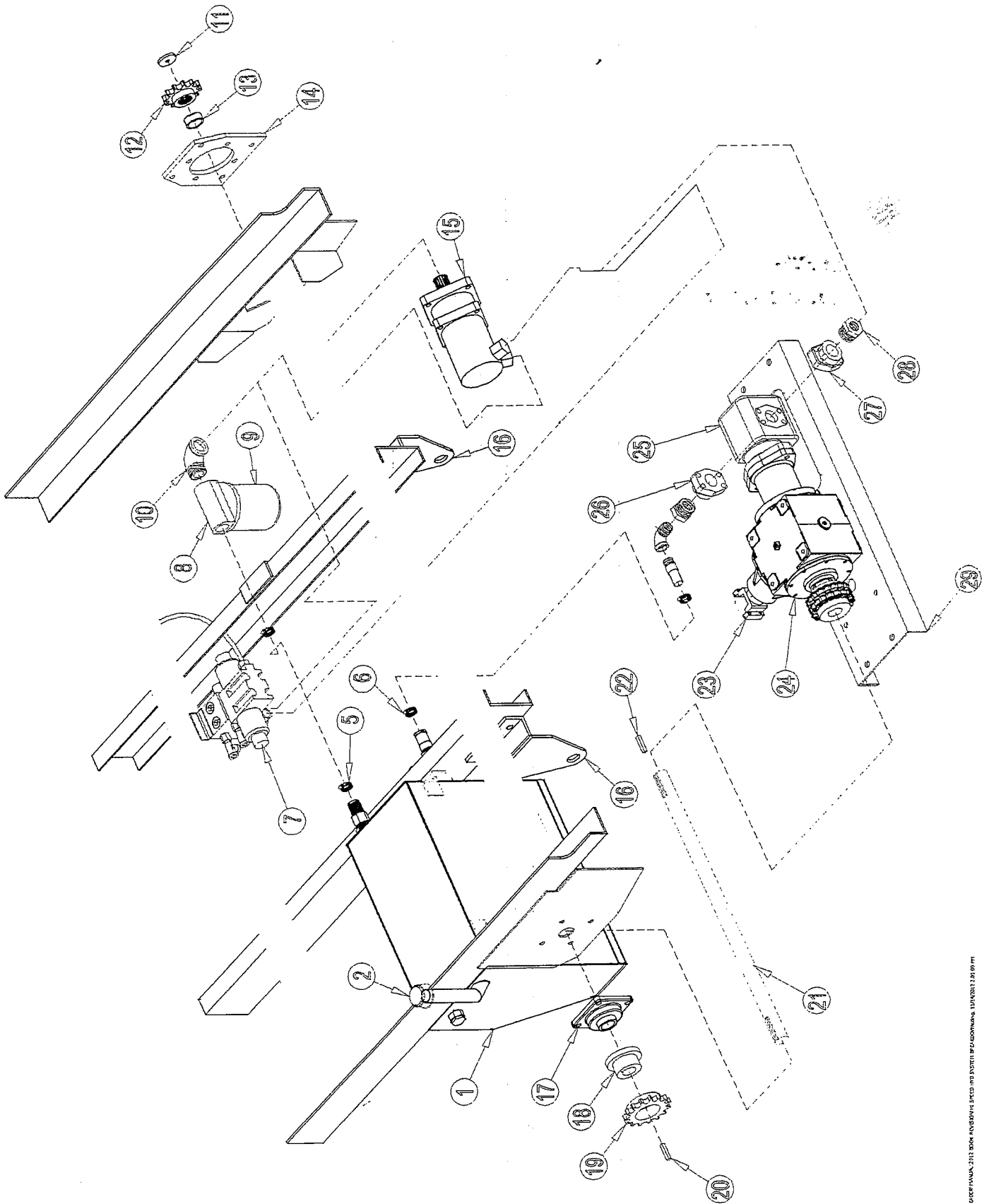
# TAIL PAN BREAK DOWN



## TAIL PAN BREAK DOWN

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	10810020	2 Chain Tail Pan W/ Hinge .....	1
	10810030	3 Chain Tail Pan W/ Hinge .....	1
2	10801200	Hinge Shaft .....	1
3	10870000	Lower Cylinder Shaft Assembly .....	1
4	10860000	Upper Cylinder Mount Pin .....	2
5	10661963 <i>ZdWT-100X</i>	2 X 11 Spreader Cylinder .....	2
6		3/8 Hose 73" GC09—6X6 X GC26—6X6 .....	1
7		3/8 Hose 66" GC09-6X6 X GC26—6X6 .....	2
8		3/8 Hose 26" GC09—6X6 X GC26—6X6 .....	1
9		3/8 Hose 10" GC09—6X6 X GC26—6X6 .....	1
10		2605/6MP—6MJ—TEE ( W/ Slop Gate ) .....	4
		2404/6MP—6MJ—ADAPTOR ( W/O Slop Gate ) .....	4

# HIGH SPEED HYDRAULIC BREAK DOWN



2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100

## HIGH SPEED HYDRAULIC SYSTEM BREAK DOWN

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	10490600	20 Gallon Hydraulic Tank .....	1
2	10261630	Tank Filler Cap .....	1
*3	SVM16NPT	Hydraulic Sight Glass .....	1
*4	11510050	Hydraulic Tank Screen .....	1
5	HCN125	1-1/4" Pipe to Hose Adapter .....	1
6	STC-1510	King Nipple .....	1
7	11409640	Flow Control Assembly .....	1
	6400-16-16	Flow Control Fitting .....	3
	6801-16-16	Flow Control Fitting .....	1
	12/6/6410	Flow Control Fitting .....	2
	6804-6-6-6	Flow Control Fitting .....	2
	6804-4	Socket Head Plug .....	1
	17063735	Test Point .....	1
8	17013620	Hydraulic Filter Assembly .....	1
9	55018013	Hydraulic Replacement Filter .....	1
10	2062-20-16S	90 Degree Elbow .....	1
11	45179000	End Cap .....	1
12	10510257	High Speed 12 Tooth, Splined Sprocket .....	1
13	10420500	High Speed Motor Spacer .....	1
14	10420200	High Speed Motor Mount Plate .....	1
15	11210636	High Speed Motor <i>Charlyson</i> .....	1
	6400-16-16	Fitting .....	2
16	10460000	Gearbox / Tail Pan Bracket Plate .....	2
17	10310240	Flange Bearing .....	1
18	10330120	Bushing 3/8" Key .....	1
19	10510110	Sprocket .....	1
20	Key 3/8 X 3	3/8" X 3" Key .....	1
21	10402000	1-1/2" Beater / Gearbox Drive Shaft .....	1
22	Key 3/8 X 1-1/2	3/8" X 1-1/2" Key .....	1
23	2-4-1053	Gearbox Yoke .....	1
24	11255170	Gearbox 1.5 to 1 w/Flange .....	1
25	11500058	High Speed Pump .....	1
26	<del>SFK-51-24</del>	Split Flange Kit .....	1
27	W46-24-24	1-1/2" Four Bolt Flange Block .....	1
28	6400-16-24	Fitting .....	1
29	10473002	Gearbox / Pump Mount Channel .....	1
*30	10330100	Coupler Sprocket .....	2
*31	10601800	Coupler Chain .....	1

Note: \*Not Shown

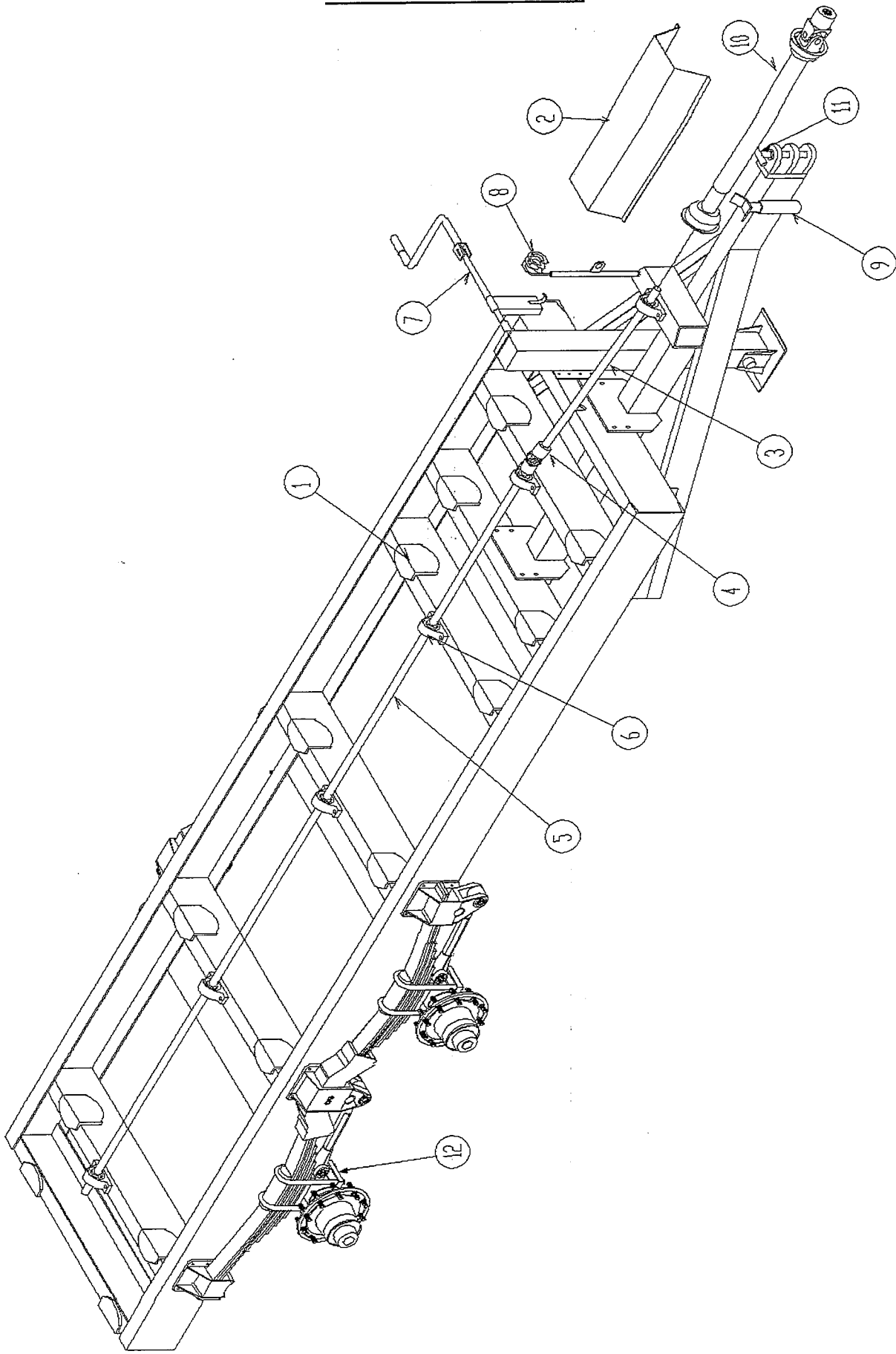
## NOTES

**HIGH SPEED HYDRAULIC SYSTEM BREAK DOWN (continued)**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
*		1" Flexdraulic 30-1/2" 16FJX x 16FJX Hose .....	1
*		1" Flexdraulic 35" 16FJX x 16FJX Hose .....	1
*		1" Flexdraulic 39-3/4" 16FJX x 16FJX Hose .....	1
*		1" Flexdraulic 50" 16FJX x 16FJX Hose .....	1
*		1" Flexdraulic 54" 16FJX x 16FJX Hose .....	1
*		1-1/4" Flexdraulic 23" Suction x Code 61-20 Hose .....	1
*		1-1/4" Flexdraulic 30" Suction Hose .....	1

NOTE: \*Not Shown

# TRAILER BREAK DOWN

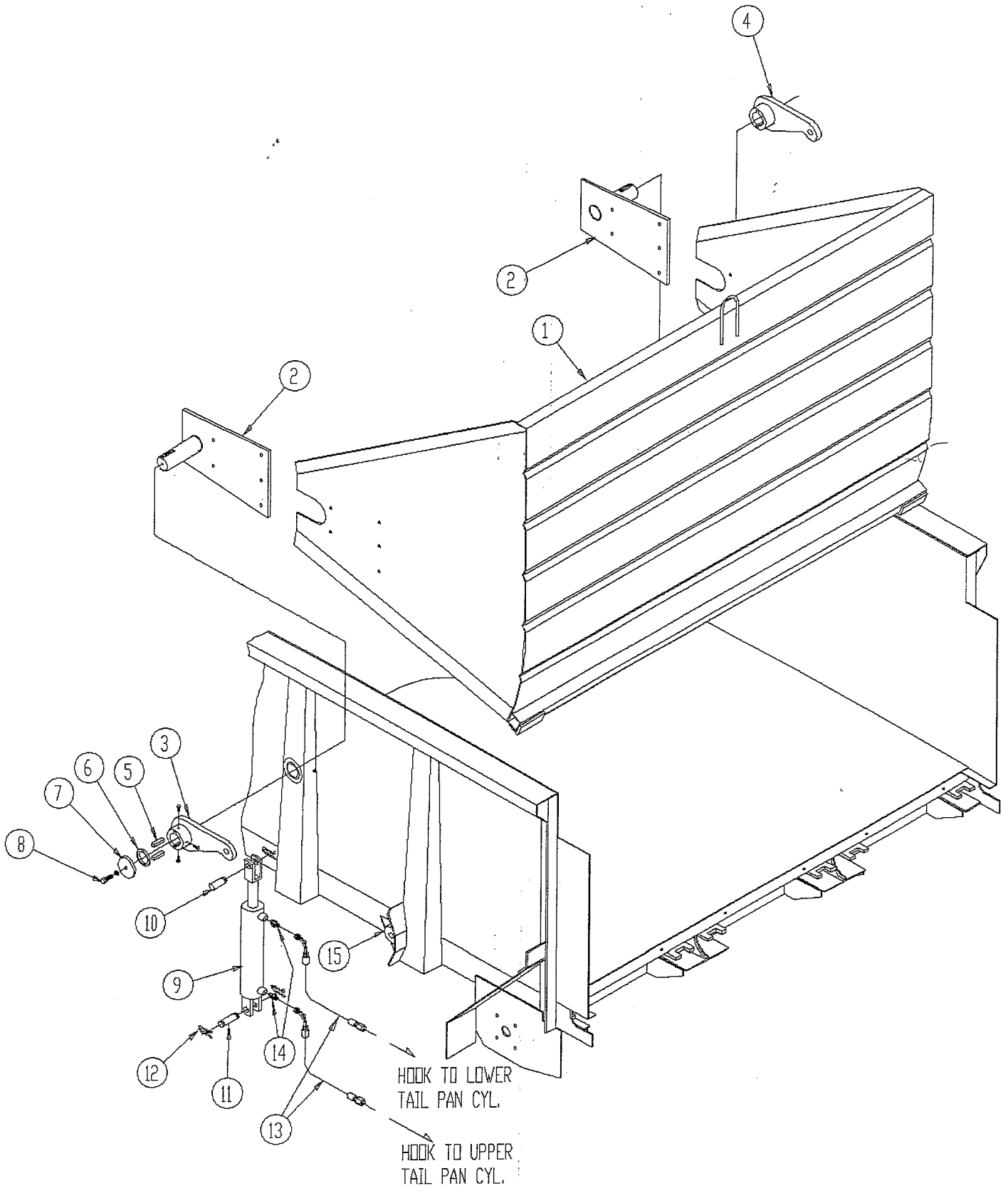


## TRAILER BREAK DOWN

ITEM NO.	PART NO.	DESCRIPTION	QTY.	
1	10991000	Mounting Pad HSXHD-14 & 15 .....	10	
		HSXHD-17—22 .....	12	
2	35301000	Safety Shield .....	1	
3	35302000	Front Drive Shaft .....	1	
4	350 1-3/8DBL	Spicer 350 1-3/8" RD Yoke .....	3	
5	35303140	Drive Shaft HSXHD-14 .....	1	
		35303150	HSXHD-15 .....	1
		35303170	HSXHD-17 .....	1
		35303180	HSXHD-18 .....	1
		35303190	HSXHD-19 .....	1
		35303200	HSXHD-20 .....	1
		35303210	HSXHD-21 .....	1
		35303220	HSXHD-22 .....	1
		6	P3U222N	1-3/8" Pillow Block Bearing HSXHD-14 & 15 .....
HSXHD-17—22 .....	6			
7	35310000	Jack Assembly .....	1	
8	30420000	Hydraulic Hose Stand .....	1	
9	30430000	PTO Bracket .....	1	
10	TR55ND-P	1-3/4" X 20" Tumbler .....	1	
11	30200000	Hinge Pin .....	1	
12	H2200S	Single Axle W/ Suspension HSXHD-14 & 15 .....	1	
	H2200T	Tandem Axle W/ Suspension HSXHD-17—22 .....	1	
*13	COMP T & W	24 P.R. Tire & Wheel .....	2 or 4	
*14	D1 1-1/8 Hex	350 1-1/8" Hex Yoke .....	1	
*15	D3 1-1/8 H SL	350 1-1/8" Hex Slip Yoke .....	1	
*16	35304000	1-1/8" Hex Shaft .....	1	
*17	350 CROSS&BRG	350 Cross & Bearing .....	3	

Note:  
\* Not Shown

# SLOP GATE BREAK DOWN

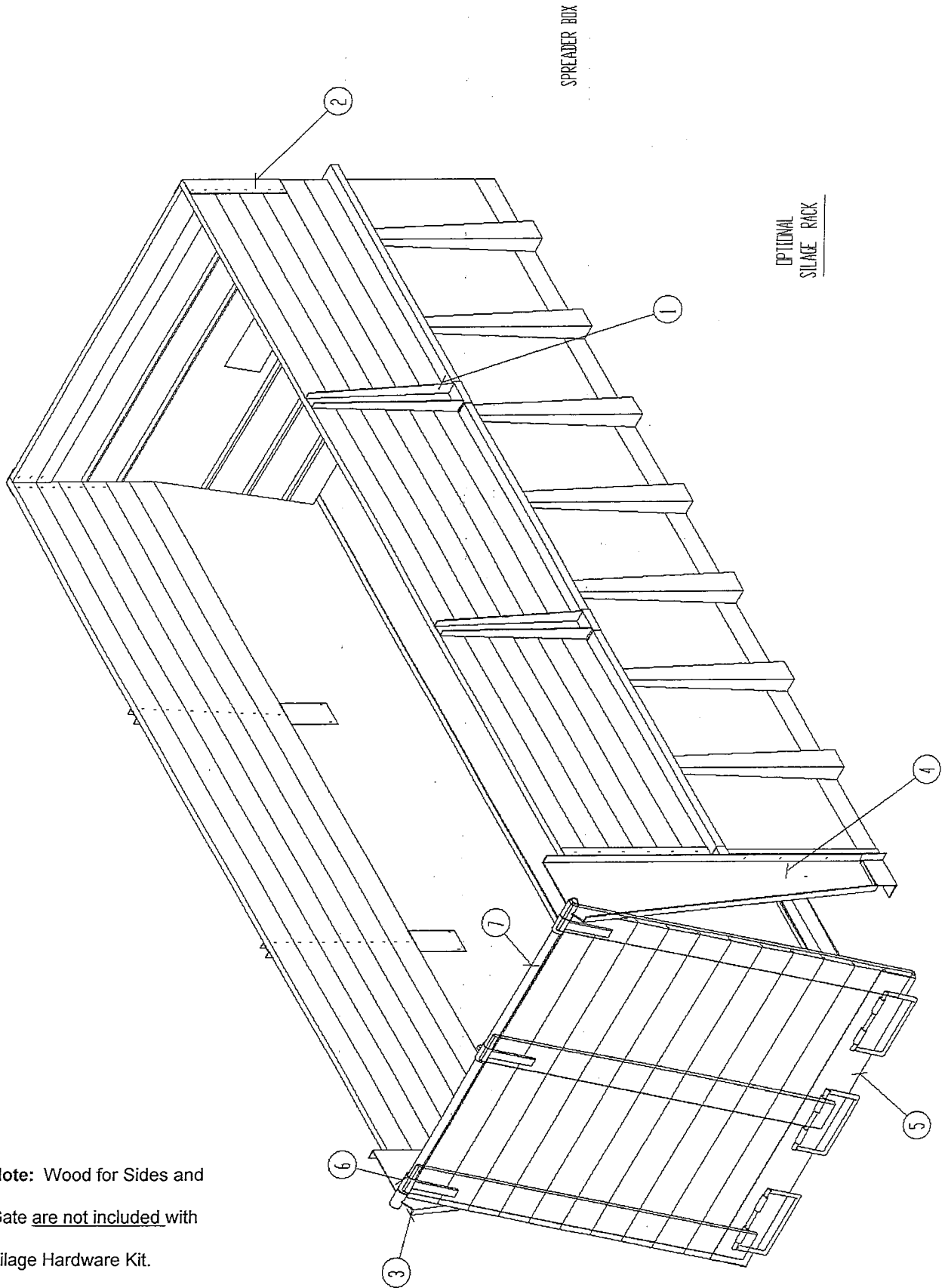


## SLOP GATE BREAK DOWN

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	11010000	Slop Gate Assembly .....	1
2	11050000	Pivot Plate & Shaft .....	2
3	11060000	Left Hand Lever & Lock Collar Assembly .....	1
4	11065000	Right Hand Lever & Lock Collar Assembly .....	1
5	Key 1/2 X 2-1/8	1/2" X 2-1/8" Keystock .....	4
6	11026000	Spacer .....	2
7	11027000	End Cap .....	2
8	1/2NC X 1-1/4 Hex	1/2"NC X 1-1/4" Hex Head Bolt .....	2
9	10661965	3 X 12 Hydraulic Cylinder .....	2
10	1 X 2-7/8 Pin	1" X 2-7/8" Cylinder Pin .....	2
11	1 X 2-7/8 Pin	1" X 2-7/8" Cylinder Pin .....	2
12	11066000	Bridge Pin .....	6
13	11028000	3/8" Hydraulic Hose 66" Long—GC09-6X6 X GC26-6X6 .....	4
14	2404-6-8	Adaptor 8MP-6MJ .....	4
15	11029000	Lower Cylinder Mount Tap .....	2
16	11021100	Lower Cylinder Mount Plate .....	2
**17	11030000	Lower Cylinder Mount Assembly .....	2
		** #15 & #16 Already Welded Together	
*19	11023000	Slop Gate Collar & Bushing .....	2
*20	11021300	Bronze Bushing Only .....	2

\* NOTE: Not Shown

# SILAGE HARDWARE KIT BREAK DOWN

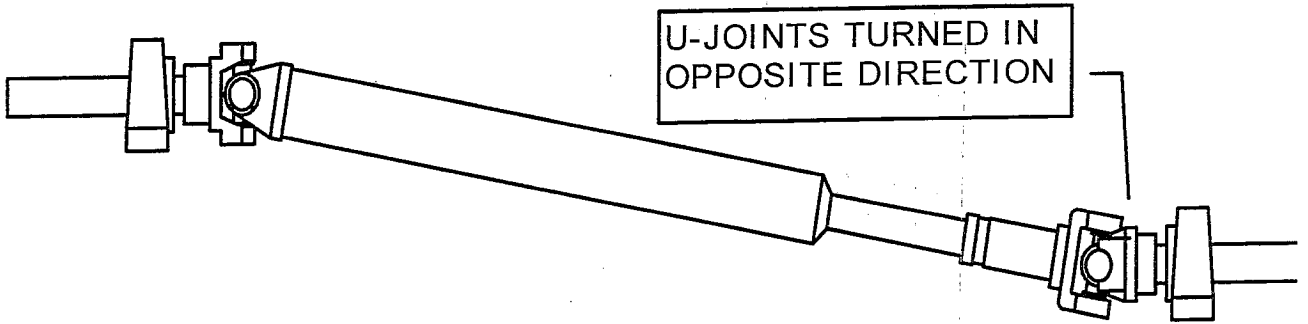


**SILAGE HARDWARE KIT BREAK DOWN**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	11240036	36" Side Stake HSXHD-14 & 15 .....	6
		HSXHD-17 & 18 .....	8
		HSXHD-19 & 20 .....	10
		HSXHD-21 & 22 .....	12
2	11213000	Front Angle .....	2
3	11251000	Left Hand Door Mount .....	1
4	11261000	Right hand Door Mount .....	1
5	11270020	Bottom Door Latch ( 2 Bed Chain ) .....	1
	11270030	( 3 Bed Chain ) .....	1
6	11280000	Door Hinge Mount .....	3
7	11225000	Hinge Pipe 90" Long .....	1

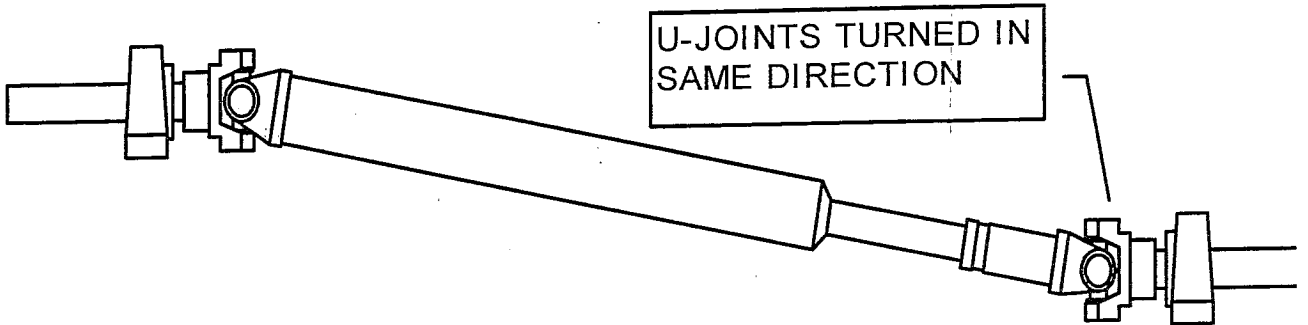
U-JOINT ALIGNMENT

**WRONG**



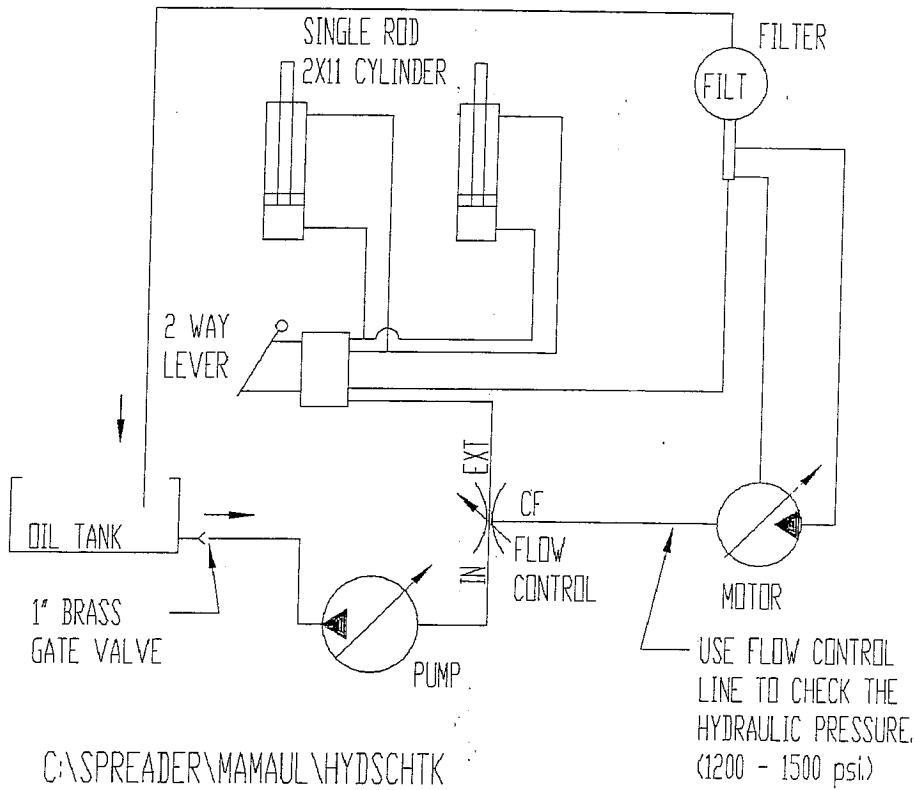
NOTE: POSITIONS OF U-JOINTS  
U-JOINTS MUST ALIGN

**RIGHT**

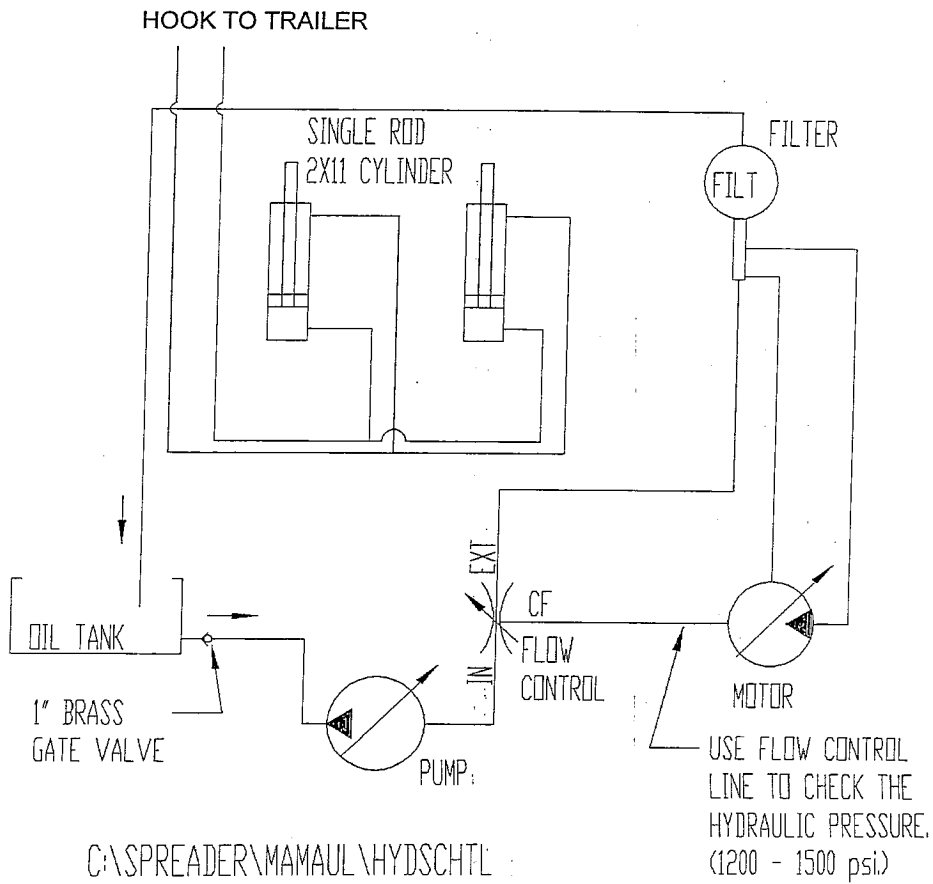


**U-JOINT ALIGNMENT**

**HYDRAULIC SCHEMATIC TRUCK MOUNT**



**HYDRAULIC SCHEMATIC TRAILER MOUNT**



## APPENDIX A

### Lubrication Schedule For Sealmaster GoldPlex-HP

Table #1

<b>Contamination Level - Clean To Light</b>			
Bearing Temperature	0—500 RPM	500 RPM To 75% Of Max Catalog Speed	75% Of Max Catalog To Max Catalog Speed
-50°F to -30°F	12-24 Months	12-24 Months	12-18 Months
-30°F to 120°F	12-24 Months	12-24 Months	8-18 Months
120°F to 180°F	8-12 Months	6-12 Months	4-8 Months
180°F to 250°F	4-8 Months	3-6 Months	2-4 Months
<b>Contamination Level - Medium</b>			
Bearing Temperature	0—500 RPM	500 RPM To 75% Of Max Catalog Speed	75% Of Max Catalog To Max Catalog Speed
-50°F to -30°F	1 Week—1 Month	1 Week—1 Month	1 Week—1 Month
-30°F to 120°F	1 Week—1 Month	1 Week—1 Month	1 Week—1 Month
120°F to 180°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
180°F to 250°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
<b>Contamination Level - Heavy</b>			
Bearing Temperature	0—500 RPM	500 RPM To 75% Of Max Catalog Speed	75% Of Max Catalog To Max Catalog Speed
-50°F to -30°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
-30°F to 120°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
120°F to 180°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
180°F to 250°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks

Table #2

### General Lubrication Schedule

<b>Contamination Level - Clean To Light</b>			
Bearing Temperature	0—500 RPM	500 RPM To 75% Of Max Catalog Speed	75% Of Max Catalog To Max Catalog Speed
-50°F to -30°F	Not Recommended	Not Recommended	Not Recommended
-30°F to 120°F	6-12 Months	6-12 Months	4-8 Months
120°F to 180°F	1-3 Months	Daily—2 Weeks	Monthly
180°F to 250°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
<b>Contamination Level - Medium</b>			
Bearing Temperature	0—500 RPM	500 RPM To 75% Of Max Catalog Speed	75% Of Max Catalog To Max Catalog Speed
-50°F to -30°F	Not Recommended	Not Recommended	Not Recommended
-30°F to 120°F	1 Week—1 Month	1 Week—1 Month	1 Week—1 Month
120°F to 180°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
180°F to 250°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
<b>Contamination Level - Heavy</b>			
Bearing Temperature	0—500 RPM	500 RPM To 75% Of Max Catalog Speed	75% Of Max Catalog To Max Catalog Speed
-50°F to -30°F	Not Recommended	Not Recommended	Not Recommended
-30°F to 120°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
120°F to 180°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks
180°F to 250°F	Daily—2 Weeks	Daily—2 Weeks	Daily—2 Weeks



**COMPLIMENT YOUR ENTIRE OPERATION  
WITH MMI QUALITY EQUIPMENT**

**MIXER-FEEDERS**

**DELIVERY BOXES**

**STATIONARY ROUGHAGE BOXES**

**COMMERCIAL MANURE SPREADERS**

**V BOTTOM COMPOST SPREADERS**

**SLIP BOXES**

**BUNK SWEEPERS**

**SCALE SYSTEMS**



**INTERNATIONAL**

---

1009 West Hwy.6  
Holdrege, NE 68949  
Phone (308) 995-9565  
Fax (308) 995-9509  
Toll Free (888) 995-9565