

# ***S u p e r a***

## **Manure Spreader**

**Model 9420 – Truck Mount**

**Model 8420 – Pull Type**

**OWNERS MANUAL**

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## LIMITED WARRANTY

*Dirks Manufacturing is a leading Forage Crop and Manure handling Manufacturer in North America. As part of our commitment to quality and reliability, Dirks Manufacturing will provide to you, at no extra charge, warranty coverage for your new equipment.*

*Please read this warranty information section. It contains the information you will need to have your Dirks equipment repaired in the unlikely event that a failure should occur. A **WARRANTY REGISTRATION FORM** is provided to you upon delivery of your new equipment. Please complete the registration form and return to Dirks Manufacturing within thirty (30) days of the equipment purchase date.*

### What is a Limited Warranty

Warranty is a written guarantee by the manufacturer or supplier of a product promising to repair or replace parts, which have a defect in materials or workmanship. "Limited" means that the Warranty is for a specified period of time, and has other restrictions.

### The Dirks Limited Warranty

Dirks Manufacturing Ltd. warrants each item of its own manufacture to be free from defects in material or workmanship. Should any part be found, under normal use and service, to be defective, the manufacturer will repair or replace said parts, **FOB factory, provided said parts are returned to the Manufacturer's plant** (freight prepaid) and that such parts are judged by the Manufacturer to be defective.

### Warranty Terms

All new Dirks Manufacturing Manure Spreaders, Models 9420 / 8420 and Manure Spreader Attachments are warranted for one year (12 months).

The warranty coverage will begin on the date shown on the invoice or bill of sale entered into at time of sale to the owner provided the Warranty Registration is submitted within 30 days of this transaction.

### Replacement Parts Warranty

Replacement parts are warranted for 90 days from date of purchase. However, if the part is installed on a unit, which has more than 90 days remaining on the original warranty, the replacement part is warranted until the original warranty expiry date.

### Additional Warranty Limitation

The aforementioned Warranty does not apply to product(s) which have been altered, changed, or repaired in any manner whatsoever without the express written permission of Dirks Manufacturing.

The aforementioned Warranty is void in all respects when, in the manufacturer's judgment, the equipment and/or product(s) have been subject to misuse, negligence, accident, and improper application(s).

### **Additional Warranty Limitation cont.**

This Warranty is the sole Warranty of Dirks Manufacturing Ltd. No other Warranty(ies) are expressed or implied.

The Warranty is only extended to the original product owner and becomes void upon resale or relocation of the unit without the express written permission of Dirks Manufacturing.

### **Transferability**

If a Dirks Manufacturing Ltd. product is sold with remaining warranty, the remaining warranty coverage may be transferred to the new owner. Dirks Manufacturing Ltd. must be contacted to transfer warranty registration information and provide the new owner with the appropriate registration form.

### **Parts for Warranty Work**

Parts ordered before a Warranty Claim number has been issued, may not be covered by the warranty and may be invoiced.

All warranty parts are to be ordered from Dirks Manufacturing. When ordering parts, Warranty claim number must be quoted and written on purchase order. (See Warranty Service Procedure).

### **Product Owner Responsibility**

The owner is solely responsible for pre-operation inspection, daily inspections, periodic inspections, maintenance and use of the product in accordance with government requirements and manufacturer's specifications as established at time of manufacture. Dirks Manufacturing recommends that the owner keep maintenance records and receipts. *The owner may be asked to provide records of maintenance and service to the manufacturer.*

It is also the owner's responsibility to operate the equipment in a safe manner, and for the use for which it was designed. If a defect in materials or workmanship occurs, it is the owner's responsibility to cease operating the equipment until repairs are made. Damage due to continued operation is not covered by this warranty. The manufacturer or dealer should be contacted immediately so repairs can be carried out in a timely manner.

### **What This Warranty Does NOT Cover**

Failures caused by:

- Abusive operation
  - Natural calamities
  - Unauthorized modifications
  - Neglected maintenance
  - Unapproved attachments
  - Usage which is contrary to the intended purpose
- > Wear or maintenance items including but **NOT** limited to:
- Filters (air, fuel, oil)
  - Light bulbs
  - Window glass
  - Lubricants & coolants (unless used during an authorized repair)
  - Belts

### What This Warranty Does NOT Cover Cont....

- Cutting blades
- Replacement maintenance items ( ie. Beater panels, shear bolts, etc.)
  
- ◆ *Pick up or delivery of equipment*
- ◆ *Rental of replacement equipment during the repair period*
- ◆ *Tires and tubes (covered by tire/tube mfg.)*
- ◆ *Products which have been declared a total loss and subsequently salvaged*
- ◆ *Overtime labor charges*
- ◆ *Business operation losses*

### Components by Others

Dirks Manufacturing Ltd. does not warranty any items, parts or machinery finished by it but not of its own manufacture, except for any warranties extended by the manufacturer of such parts or machinery.

### Labor Consideration

If Dirks Manufacturing Ltd. in its sole discretion, determines that a repair facility other than the dealership or factory shall perform the warranty work, Dirks will pay a specified labor amount for repair or replacement as determined and approved by Dirks Manufacturing, **before any such work has started.**

### How to Obtain Warranty

To obtain warranty service under the terms and conditions of the Dirks Manufacturing warranty, it is the owner's responsibility to deliver the product to the dealer or the manufacturer with proof of purchase.

The approved warranty repairs may be made by the dealer or manufacturer **representative**, at the customer's location, if the product is unable to be delivered to the dealership or manufacturer. Please note that the dealer or manufacturer may charge for pickup and delivery, or for travel time and mileage.

### Warranty Service – Owner's Responsibility

The owner is responsible for communication expenses, meals, lodging, and incidental costs incurred by owner or employees of the owner as a result of warrantable failure.

The owner is responsible for "down time" expenses, cargo damage, and all business costs and losses resulting from a warrantable failure. These charges are not covered under the Dirks Manufacturing Ltd. Warranty.

### **Warranty Service – Procedure**

1. Contact the Dealership. If no Dealership is present in your area, contact Dirks Manufacturing toll free at **1-888-996-8616**.
2. A Warranty Claim number will be issued by Dirks Manufacturing. This number is to be written on all correspondence regarding the claim.

#### **NOTE:**

- **Warranty claims will not be processed without a pre-authorized warranty claim number from the manufacturer**
- **Not completing the claim form properly can affect the claim being accepted**
- **Warranty service will not commence without written authorization from the manufacturer**

### **Right to Make Changes**

Dirks reserves the right to make any changes to a Dirks product at any time without incurring any obligation with respect to any product previously ordered, sold, or shipped.

### **Special Order Equipment**

The product owner is responsible to provide Dirks Manufacturing with accurate information regarding the specifications for a "Special Order" piece of equipment, including detailed information on the intended operational environment of the product(s). Further, the product owner is required to approve in writing the final design of any "Special Order" equipment designated for a specific application or use.

## SAFETY

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



THIS SYMBOL MEANS  
- ATTENTION!  
- BECOME ALERT!  
- YOUR SAFETY IS INVOLVED!

### SIGNAL WORDS:

Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

**DANGER:** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

**WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

**CAUTION:** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer.

SAFETY....YOU CAN LIVE WITH IT



## **SAFETY....YOU CAN LIVE WITH IT**



### **EQUIPMENT SAFETY GUIDELINES**

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

Replace any CAUTION, WARNING, DANGER or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**

To prevent injury or death, use a tractor equipped with a Roll Over Protective System (ROPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely is in question – **DON'T TRY IT.**



### **LIGHTING AND MARKING**

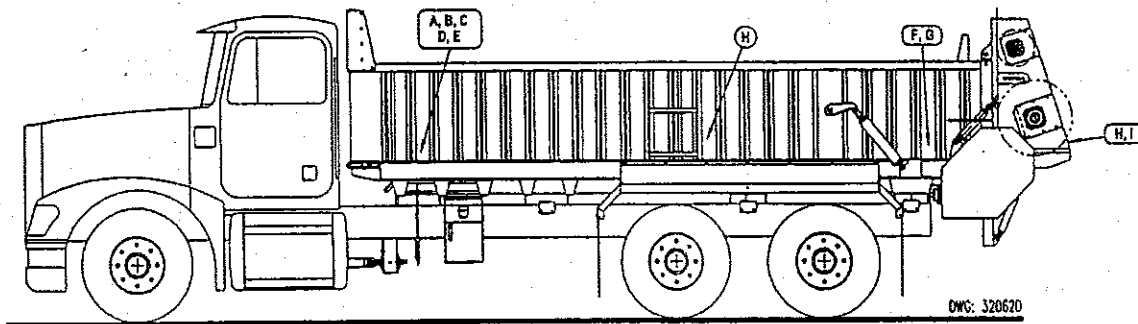
It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.

Lighting kits are available from your dealer or from the manufacturer.



## SAFETY SIGN LOCATIONS

The types of Safety Sign and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various Safety Signs, the type of warning and the area, or particular function related to that area that requires your SAFETY AWARENESS.



**A**

**CAUTION**

**DIRKS SUPERA BOX OPERATING INSTRUCTIONS**

1. Circle check machine to be sure no one is behind or near box before engaging chain
2. Place Floor Speed Lever to neutral
3. Depress Clutch.
4. Engage PTO
5. Release clutch noting final beater are engaged.
6. Gently depress accelerator pedal to increase speed.

**DO NOT EXCEED THESE RPM RATINGS FOR OPERATION**  
 GAS ENGINE: 2600 RPM    DIESEL: 2100 RPM

7. Engage Floor Speed Lever to increase floor speed.
8. When box is empty depress clutch and disengage PTO.
9. If hauling sludge, close slope gate and be sure locking pins are engaged securely to chain links.

DIRKS MFG. LTD. DM-183

**B**

**CAUTION**

**ADJUST CHAINS EVERY 20 HOURS OF USE**

DIRKS MFG. LTD. DM-20

**C**

**CAUTION**

**GREASE ENTIRE MACHINE EVERY 20 HOURS OF OPERATION DO NOT OVERGREASE**

DIRKS MFG. LTD. DM-21

**D**

**CAUTION**

**LUBRICATE CHAINS WEEKLY AND AFTER SEASONS USE USE GENEROUS AMOUNTS OF ANY OIL USED MOTOR OIL IS RECOMMENDED ALLOW MACHINE TO RUN 5 MINUTES AFTER OIL HAS BEEN APPLIED**

DIRKS MFG. LTD. DM-24

**E**

**WARNING**

To prevent Serious Injury or Death

- Avoid unsafe operation or maintenance
- Do not operate or work on this machine without reading and understanding the operator's manual.
- If manual is lost, contact your nearest dealer for a new manual.

DIRKS MFG. LTD. DM-22

**F**

**WARNING**

**REPLACE SHIELDS AND GUARDS BEFORE OPERATING MACHINE**

DIRKS MFG. LTD. DM-23

**G**

**WARNING**

**ALWAYS TURN ENGINE OFF AND PLACE MACHINE IN OFF POSITION BEFORE GREASING OR REMOVING SHIELDS**

DIRKS MFG. LTD. DM-25

**H**

**DANGER**

**DO NOT ENTER OR ADJUST MACHINE WHILE IN OPERATION**

DIRKS MFG. LTD. DM-27

**I**

**DANGER**

**KEEP HANDS AND FEET CLEAR OF ALL MOVING PARTS**

DIRKS MFG. LTD. DM-28

(pull type only)

**CAUTION**

**CHECK WHEEL NUTS AND TIRE PRESSURE REGULARLY SET TIRE PRESSURE ACCORDING TO SPECIFICATION ON SIDEWALL OF TIRE**

DIRKS MFG. LTD. DM-29

**REMEMBER:** If Safety Signs have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized distributor or factory.



## **SAFETY SIGN CARE**

- Keep safety signs clean and legible at all times
- Replace safety signs that are missing or have become illegible
- Replaced parts that displayed a safety sign should also display the current sign
- Safety signs are available from your Distributor or Dealer Parts Department or the factory

### **How to Install Safety Signs:**

- Be sure that the installation area is clean and dry
- Decide on the exact position before you remove the backing paper
- Remove the smallest portion of the split backing paper
- Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper



## **TIRE SAFETY**

- Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death
- Do not attempt to mount a tire unless you have the proper equipment and experience to do the job
- Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires.
- Always order and install tires and wheels with appropriate capacity to meet or exceed the anticipated weight to be placed on the equipment.



- **REMEMBER**

**Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.**



### **BEFORE OPERATION:**

- Carefully study and understand this manual
- Do not wear loose-fitting clothing which may catch in moving parts
- Always wear protective clothing and substantial shoes
- It is recommended that suitable protective hearing and (eye protection) sight protectors be worn
- The operator may come in contact with certain materials which may require specific safety equipment, relative to the handling of such materials (examples: extreme dust, molds, fungus, bulk fertilizers, etc)
- Keep wheel lug nuts or bolts tightened to specified torque
- Assure that agricultural implement tires are inflated evenly
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual
- Be sure that there are no tools lying on or in the equipment
- Do not use the unit until you are sure that the area is clear, especially children and animals
- Because it is possible that this equipment may be used in dry areas or in the presence of combustibles, special precautions should be taken to prevent fires and fire fighting equipment should be readily available
- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using
- Make sure that the brakes are evenly adjusted (if equipped with brakes)
- Use a tractor equipped with a Roll Over Protective System (ROPS) and fasten your seat belt prior to starting the engine
- The manufacturer does not recommend usage of a tractor with the ROPS removed
- Move tractor wheels to the widest recommended settings to increase stability
- Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach safety chain
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the equipment



## DURING OPERATION

- SAFETY CHAIN – If the equipment is going to be transported on a public highway, a safety chain should be obtained and installed. Always follow Provincial, State and local regulations regarding a safety chain and auxiliary lighting when towing farm equipment on a public highway. Be sure to check with local law enforcement agencies for your own geographical regulations. Only a safety chain (not an elastic or nylon/plastic tow strap) should be used to retain the connection between the towing and towed machines in the event of separation of the primary attaching system.
- Install the safety chain by crossing the chains under the tongue and secure to the draw bar cage or hitch or bumper frame
- Beware of bystanders, **particularly children!** Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs
- **NO PASSENGERS ALLOWED** - Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operation
- Keep hands and clothing clear of moving parts
- Do not clean, lubricate or adjust your equipment while it is moving
- When halting operation, even periodically, set the truck, tractor or towing vehicle brakes, disengage the PTO, shut off the engine and **remove the ignition key**
- Be especially observant of the operating area and terrain – watch for holes, rocks or other hidden hazards. Always inspect the area prior to operation



- DO NOT operate near the edge of drop-offs or banks

DO NOT operate on steep slopes as overturn may result

Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops

- Pick the levellest possible route when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides
- Be extra careful when working on inclines
- Periodically clear the equipment of brush, twigs or other materials to prevent buildup of dry combustible materials
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death
- Avoid loose fill, rocks and holes; they can be dangerous for equipment operation or movement
- Allow for unit length when making turns



### DURING OPERATION Cont....

- Do not walk or work under raised components or attachments unless securely positioned and blocked
- Keep all bystanders, pets and livestock clear of the work area
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit
- Never leave running equipment attachments unattended
- As a precaution, always recheck the hardware on equipment following every 100 hours of operation. Correct all problems. Follow the maintenance safety procedures
- Operate the towing vehicle from the operator's seat only



### FOLLOWING OPERATION:

- Following operation, or when unhitching, stop the tractor or towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and **remove the ignition keys.**
- Store the unit in an area away from human activity
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result
- Do not permit children to play on or around the stored unit
- Make sure all parked machines are on a hard, level surface and engage all safety devices
- Wheel chocks may be needed to prevent unit from rolling



## HIGHWAY AND TRANSPORT OPERATIONS:

- Adopt safe driving practices:

Keep the brake pedals latched together at all times. **NEVER USE INDEPENDENT BRAKING WITH MACHINE IN TOW AS LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT**

Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum

Reduce speed prior to turns to avoid the risk of overturning

Avoid sudden uphill turns on steep slopes

Always keep the truck, tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast

Do not drink and drive!

- Comply with state and local laws governing highway safety and movement of farm machinery on public roads
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway, during daylight and nighttime transport, in accordance with State or Provincial Department of Transport specifications. Various safety lights and devices are available from your dealer
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements
- When driving a tractor and equipment on the road or highway under 40 kph ( 20 mph ) at night or during the day, use flashing amber warning lights and a slow moving vehicle ( SMV ) identification emblem
- Plan your route to avoid heavy traffic
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating
- Watch for obstructions overhead and to the side while transporting
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc



## PERFORMING MAINTENANCE:

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble
- Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation
- Before working on this machine, stop the towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and **remove the ignition keys**
- Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance
- **Always** use a safety support and block the wheels. Never use a jack to support the machine
- Always use the proper tools or equipment for the job at hand
- Use extreme caution when making adjustments
- Follow the torque chart in this manual when tightening bolts and nuts
- Never use your hands to locate a hydraulic leak on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate the skin
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure
- Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. **If injured by escaping hydraulic fluid, see a doctor at once. Gangrene can result. Without immediate medical treatment, serious infection and reactions can occur**
- Replace all shields and guards after servicing and before moving
- After servicing, be sure all tools, parts and service equipment are removed
- Do not allow grease or oil to build up on any step or platform
- Never replace hex bolts with less than grade five bolts unless otherwise specified. Refer to bolt torque chart for head identification marking
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment

## MAINTENANCE/SERVICE INFORMATION

### Gear Box Service and Lubrication

- Check oil level to top of filler hole every 100 hours
- Replace oil each season or sooner if conditions are extreme
- Recommended gear oil is 80W-90 Gear Lube or equivalent
- Dispose of oil in a responsible manner. Consult local authorities for disposal site

### Bearings and Drive Line

- Inspect bearings for wear and heat every 100 hrs
- Lubricate bearings with general purpose grease
- **Do not over grease bearings. This could shorten life span**
- Inspect all couplers and shafts for a tight secure fit

### Shear Bolt and Overrunning Clutch

The safety features in this assembly are designed to:

1. Protect your equipment in the event of an excessive load or sudden impact.
2. Provide free spin to the beaters when the equipment is shut down.

An excessive load to the drive line could damage the line. Avoid possible damage to the drive line with proper care and regular service to the assembly.

Follow the service schedule provided in this manual, using only recommended replacement parts.

- Clean off any build up material on assembly every 20 hrs
- Grease clutch assembly every 100 hrs. Use general purpose grease
- Service shear pin assembly every season by removing shear bolt and rotating the beaters by hand. Grease the shear pin assembly as it rotates

**Always perform maintenance with machine stopped and engine shut off**

*Replace shear bolt with recommended bolt. DO NOT USE ANY OTHER BOLT*

### Hydraulic Oil

- Inspect oil level every 20 hrs
- Replace every season or sooner if conditions are extreme
- Dispose of oil in a responsible manner. Consult local authorities for disposal site
- Recommended hydraulic oil is Petro Can HVI 38 or equivalent: \*
  - \* Chevron AW MV 32
  - \* Mobil DTE 13M
  - \* BP Energol SHF 32
  - \* Texaco Rando Superflow AZ
  - \* Esso – Enertec Hydraulic Oil A2





### Floor Chain Lubrication

- Chain should be cleaned and lubricated weekly
- Use generous amounts of oil. Used oil is recommended
- Allow machine to run five minutes after oil has been applied
- Re tension chain at this time



**Never enter machine while machine running**

### Chain Tension

Chain tension adjusters are at the front of the box behind truck cab

- Inspect chain for wear and tension weekly
- Tension chains to a deflection of 6 – 7" at center span
- Loose chains cause excessive wear and damage
- Chains that are too tight accelerate wear



**Never enter box while machine is running**

### Seasonal Storage

- Perform all service recommended in Maintenance Schedule (Page 17)
- Lubricate chains
- Inspect box for wear and damage
- Keep dry during storage

# LUBRICATION & SERVICE SCHEDULE

## MODEL 9420 & 8400 Supera Spreaders

	Every 20 hrs		Every 100 hrs		Seasonal	
	0	X	0	X	0	X
Floor Chain	0	X			0	X
Drive Chain			0	X	0	X
Bearings			0	X	0	X
Gear Box				X	0	X
Drive Line		X	0	X	0	X
All Bolts & Fasteners				X		X
Frame						X
Wheel Nuts		X				X
Hydraulic Fluid		X			0	
Hydraulic Cylinders				X		X
Lights & Wires		X				X
Hydraulic Lines						X
Control Linkage						Adjust
Belts		X				X
Guards		X				X
Tail Gate	0	X			0	X
Wheels & Tires		X				X
Shear Bolt Assembly		X			0	X
Overrunning Clutch		X			0	X

0 = Service and lubricate as recommended

X = Inspect for wear or damage

**NOTE: Service and lubrication does not apply to truck –  
Application to Box and Spreader only**



**Factory recommends that ALL BOLTS AND FASTENERS BE RE  
TORQUED AFTER THE FIRST 20 HOURS OF USE**



***AVOID INJURY: Never service machine while running. Follow safety  
procedures in this manual for service and maintenance.***

<u>Problem</u>	<u>Possible Cause</u>	<u>Solution</u>
<b>Beaters not turning</b>	<ol style="list-style-type: none"> <li>1. Shear Bolt Broke</li> <li>2. Chain Damaged</li> <li>3. Ty Drive Belt Broken</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace Shear/Bolt</li> <li>2. Inspect &amp; Replace as necessary</li> <li>3. Replace Ty Drive Belt</li> </ol>
<b>Floor not moving</b>	<ol style="list-style-type: none"> <li>1. Oil line punctured</li> <li>2. Control Cable disconnected</li> <li>3. Load too heavy</li> <li>4. Valve malfunction</li> <li>5. Chain frozen down</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace broken hose</li> <li>2. Inspect &amp; Adjust</li> <li>3. Reduce load size</li> <li>4. Contact factory</li> <li>5. Allow machine to warm up</li> </ol>
<b>Floor not moving - reverse</b>	Control Cable out of adjustment	Adjust cable
<b>Tail Gate wont go up</b>	<ol style="list-style-type: none"> <li>1. Hydraulic Lines leak</li> <li>2. Electric controls disconnected or shorted</li> <li>3. Frozen down</li> <li>4. Small Hydraulic pump malfunction</li> <li>5. Valve Malfunction</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect and replace broken hose</li> <li>2. Inspect and replace faulty wires or switch</li> <li>3. Allow machine to warm up</li> <li>4. Replace pump</li> <li>5. Contact dealer or factory</li> </ol>
<b>Ty Drive Noise</b>	<ol style="list-style-type: none"> <li>1. Belt too loose</li> <li>2. Pulleys shifted</li> <li>3. Belt rubbing side of case</li> </ol>	<ol style="list-style-type: none"> <li>1. Re tension</li> <li>2. Re align pulleys and belt</li> <li>3. Contact Dealer</li> </ol>

# BOLT TORQUE

## CHECKING BOLT TORQUE

The table shown below gives correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

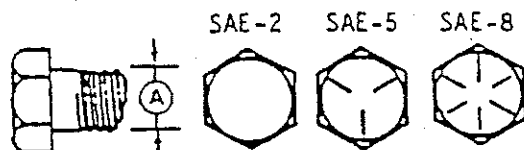
## TORQUE SPECIFICATIONS

Bolt  
Diameter                      Bolt Torque \*

"A"	SAE 2		SAE 5		SAE 8	
	Lb.-ft	(N.M.)	Lb.-ft	(N.M.)	Lb.-ft	(N.M.)
1/4"	6	(8)	9	(12)	12	(17)
5/16"	10	(13)	19	(25)	27	(36)
3/8"	20	(27)	33	(45)	45	(63)
7/16"	30	(41)	53	(72)	75	(100)
1/2"	45	(61)	80	(110)	115	(155)
9/16"	70	(95)	115	(155)	165	(220)
5/8"	95	(128)	160	(215)	220	(305)
3/4"	165	(225)	290	(390)	400	(540)
7/8"	170	(230)	420	(570)	650	(880)
1"	225	(345)	630	(850)	970	(1320)

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

- Torque value for bolts and capscrews are identified by their head markings



- \* WHEEL NUTS ON Pull TYPE SPREADER TORQUED TO 180 FT. POUNDS
- \* MUST USE SHEAR BOLT REPLACEMENT - GR 5 5/16 X 2 1/4 NC - NUT 5/16 STOVER

## Supera Installation Instructions

- Install Truck Box onto truck frame as per "TRUCK BOX MOUNTING INSTRUCTIONS". Become familiar with these instructions and call factory if uncertain or if requiring assistance
1. Install TyDrive assembly underneath box choosing either mounting location depending on cross member interference. Secure TyDrive allowing for clearances to Drive Shaft and Truck Frame.
  2. Connect Drive Line to Ty Drive using couplers provided, ensuring that Shafts have  $\frac{1}{4}$  -  $\frac{1}{2}$  inch end clearance and couplers are equally placed onto both Ty Drive Shaft and Drive Line Shaft.
  3. Install the belt on the drive pulleys. Take up the slack and check for proper alignment. Using a straight edge or metal tape for long centers, you can easily check for parallel or angular alignment.

Lay the straight edge along the face of both sprockets. Misalignment will show up as a gap between the outside face of the sprocket and the straight edge. Although alignment tolerances allow for  $\frac{3}{16}$  of an inch for parallel misalignment and  $\frac{1}{4}$  degree for angular misalignment, try to keep the tolerances to half these values to achieve maximum tooth engagement and belt performance.
  5. With the belt riding in the middle of both sprockets, rotate the drive in a clockwise direction and look for the belt to ride up against one of the flanges (either side). Now rotate the drive in a counter clockwise direction and look for the belt to travel across the face and ride up against the opposite flange. If the belt does not perform as described above, you will need to re-align the sprockets and do this test again.
  6. Belt tensioning is the next step and the objective of tensioning is to apply the least amount of force to overcome the highest load the belt will encounter. Using a Gates Tension Tester, in conjunction with the force deflection factors supplied with the belt, you can eliminate a lot of guesswork. **\*\*\* Too little or too much tension may greatly reduce belt life.\*\*\***
  7. Using the Force/Deflection method of tensioning, you deflect the belt  $\frac{3}{8}$  of an inch using 60 lbs. of pressure at the center of the belt between both sprockets. Using a Gates Tension Tester, this procedure is made easier. Contact the factory for this option.

Following these guidelines will ensure long life for your Gates belts.
  8. Install customer supplied PTO onto truck transmission using instructions supplied by PTO supplier. Factory will give recommendations or supply if requested.
  9. Connect PTO output shaft to Ty Drive input shaft using Drive Line Kit provided. **\*\* HAVE QUALIFIED MACHINE SHOP ASSEMBLE AND WELD DRIVE SHAFT. \*\*** Ensure drive shaft is timed.
  10. Attach hydraulic pumps to the pump mount on the back of the Ty Drive, using the chain coupling to couple the pump to the Ty Drive shaft. For testing leave chain off.
  11. Using Drawing 01-19696D, connect all hydraulic lines from tank to pump and from pump to pressure lines underneath box.
  12. Fill oil tank with oil.
    - **Make sure valves are open on the tank**
    - Check oil level during startup procedures

## SUPERA INSTALLATION INSTRUCTIONS Cont....

13. Mount control console into cab of truck.
  - Connect and install PTO Air Shift control using instructions supplied by PTO manufacturer
  - Run wire from electric switch in control panel to rear of box and connect to hydraulic valves as per drawing 01-24001B
  - Install control arm onto pump. Run control cable from in cab console to the pump arm. Set up the control lever so that neutral on the lever is neutral on the pump
  
14. Follow start up procedure on Initial Start Up.

## WET KIT INSTALLATION

1. Install PTO on transmission as per PTO Manual Instructions.
2. Connect hydraulic pump to PTO. **NOTE: REPLACE TRANSMISSION OIL AT THIS TIME**
  - Determine pressure side and intake side off pump by engine rotation. **Do not run without oil**
3. Install hydraulic tank on frame where best suited. Install relief valve on top port of tank.
4. Install gate valve at bottom, side port of tank. Hook up suction hose from the gate valve to suction side of pump.
5. Install filter directly onto tank using a topside port. Note the correct flow through the filter body.

**NOTE:** Install as much of the wet kit as possible before mounting the box.

## TRUCK BOX MOUNTING INSTRUCTIONS

6. Determine and mark on truck frame where front of box is to be located.
7. Measure truck frame length and axle position. Shorten or add to truck frame as required to match box dimensions.
8. Drill truck frame and install six mounting plates evenly down the rear 2/3 of the frame. Mount plates loosely. See Figure (12)
9. Set box on truck.
10. Weld mounting plates to main rail of truck box. Multi-pass on each flat bar.
11. Install spring clamps as far ahead on truck box rail as possible. One on each side.
12. Connect running light harness to truck electrical harness.
13. Install mudflaps.

**NOTE:** There may be a need for a flat bar spacer between any rivets on the frame and the truck box. Place the flat bar on the frame and cut out holes around the rivets.

## TRUCK BOX STARTUP PROCEDURES

1. Set floor speed lever to neutral.
2. Engage PTO and set motor to idle.
3. Visually inspect driveline, gearbox and beater rotation.
4. Engage floor speed lever.
  - Watch floor chains for smooth operation
  - Watch floor drive chains
5. After a twenty minute break-in period, check all chains.

**Note: New chains need to "set in" and require frequent re-tensioning.**

6. Replace all guards and covers. **Never operate the machine without guards and covers.**
7. Shut off machine before performing any adjustments.



**AVOID SERIOUS INJURY - DO NOT ENTER BOX WHEN INITIAL START UP IN PROCESS OR WHILE FLOOR CHAIN IS MOVING.**



## OPTIONAL KITS

### Silage Kit

2 Walls 36"  
2 Walls 48"  
1 Tailgate  
1 Fold Down Extension

Part No: 32070 D  
32069 D  
19702 D  
32074 D

### Swing Out Spreader

19669 D

Hydraulically swings out beaters to allow objects to exit.

Includes:

2 Cylinders Part #  
Hydraulic Valve  
Electric Switch  
Decal  
Wire

### Plywood Liner

20315 D

Prevents manure from freezing.

Pressure Treated Plywood  
Bolts

### Hydraulic Slop Pan

19700 D

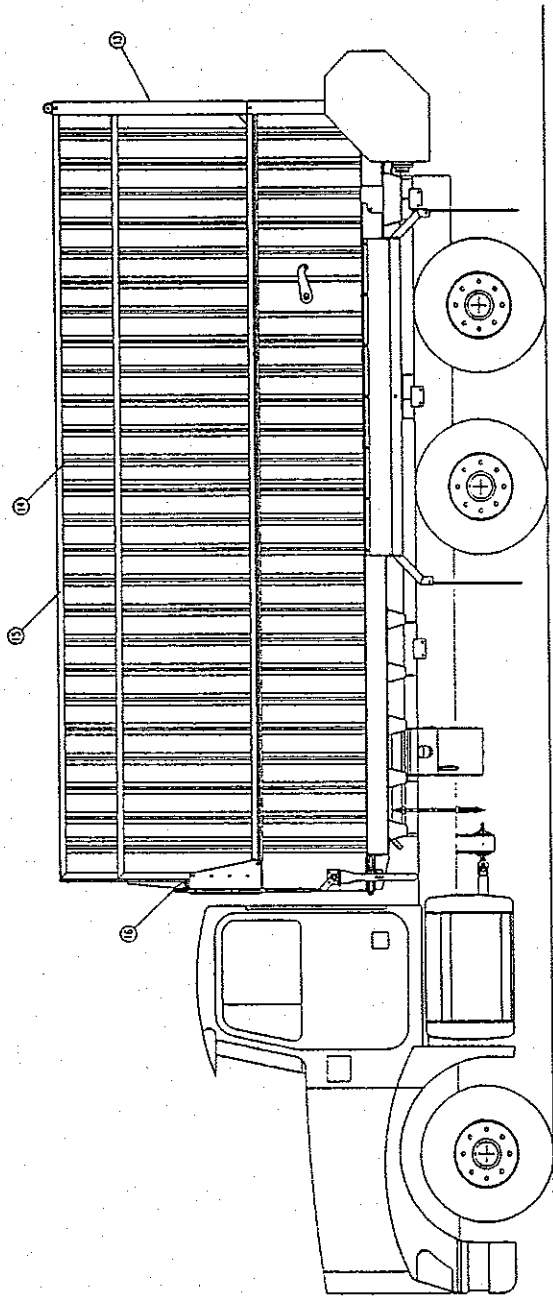
Catches drips off beater in transport.

Includes:

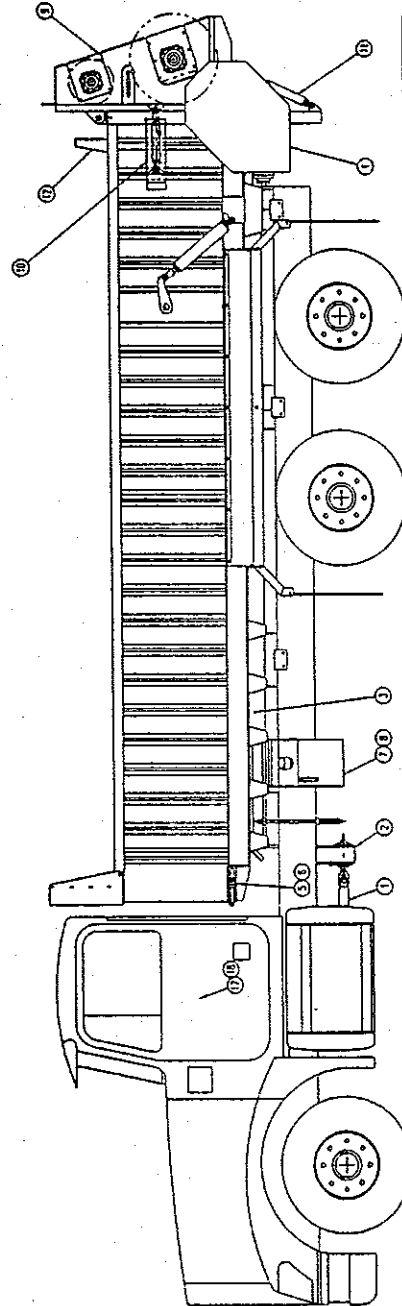
Pan  
Hydraulics  
Cylinders  
Brackets

# MODEL 9420

PLEASE CONSULT THE OPERATING INSTRUCTIONS AND THE MANUAL OF THE MODEL 9420 FOR THE MAINTENANCE AND REPAIR OF THIS MODEL. THE MAINTENANCE AND REPAIR MANUAL IS AVAILABLE SEPARATELY AND MAY BE PURCHASED FROM THE MANUFACTURER.



FORAGE BOX CONFIGURATION WITH EXTENSION KIT



MANURE BOX CONFIGURATION WITH SPREADER ATTACHMENT

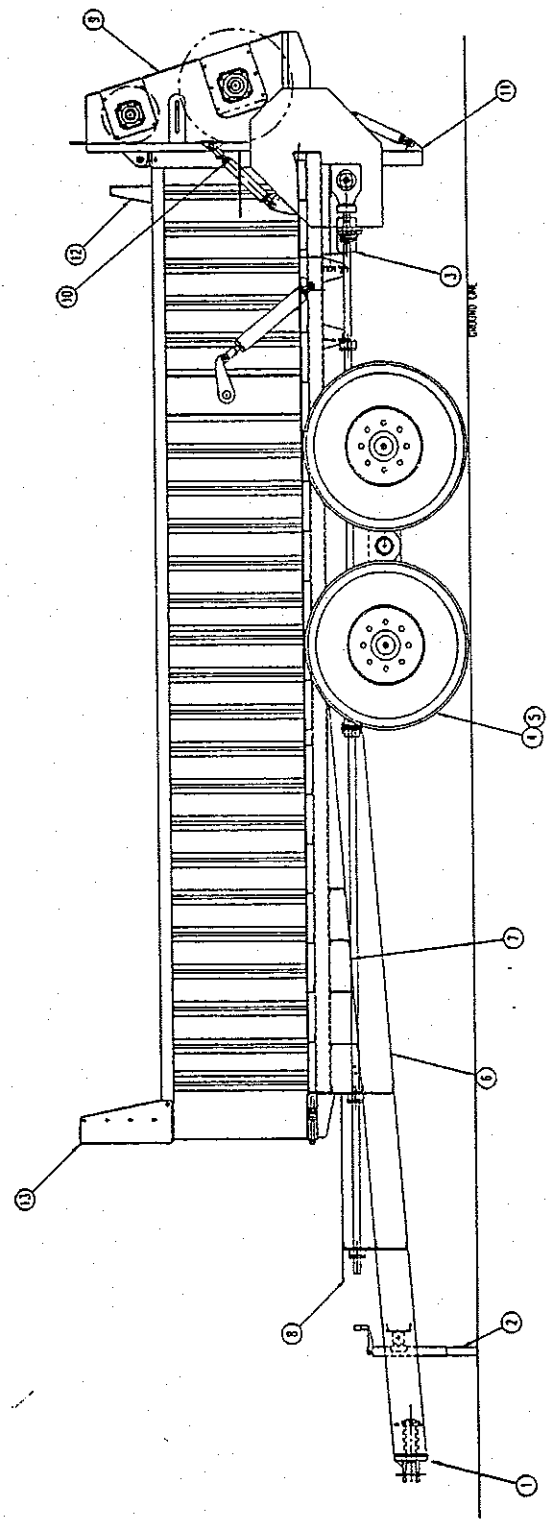
11	SLIP PAN OPTION	01-157000	1
10	SWING-OUT OPTION / OPTIONAL	01-194300	1
9	MANURE SPREADER ASSEMBLY	01-230000	1
7	MANURE BOX HYDRAULICS ASSEMBLY	01-194000	1
6	SLURP SEAL ASSEMBLY	01-200000	1
5	FLOOR INSULATOR ASSEMBLY	01-174000	1
4	FLOOR CURB DRAIN ASSEMBLY	01-203500	1
3	MIDWATER DRIVE LINK ASSEMBLY	01-230000	1
2	POWER TRANSFER BOX ASSEMBLY	01-230000	1
1	PTO TO T. DRIVE	01-194000	1
NEW		01-194000	1

**DLTKA**

DATE: 11 20 92  
 DATE: 12 05 92  
 PART NO. 00000 01-40001A100  
 MANURE/FORAGE BOX PARTS ASSEMBLY

NOTE: DIMENSIONS AND SPECIFICATIONS ARE THE PROPERTY OF  
 DEERE AND COMPANY. ALL RIGHTS ARE RESERVED. NO PART OF THIS  
 DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY  
 MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING,  
 OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

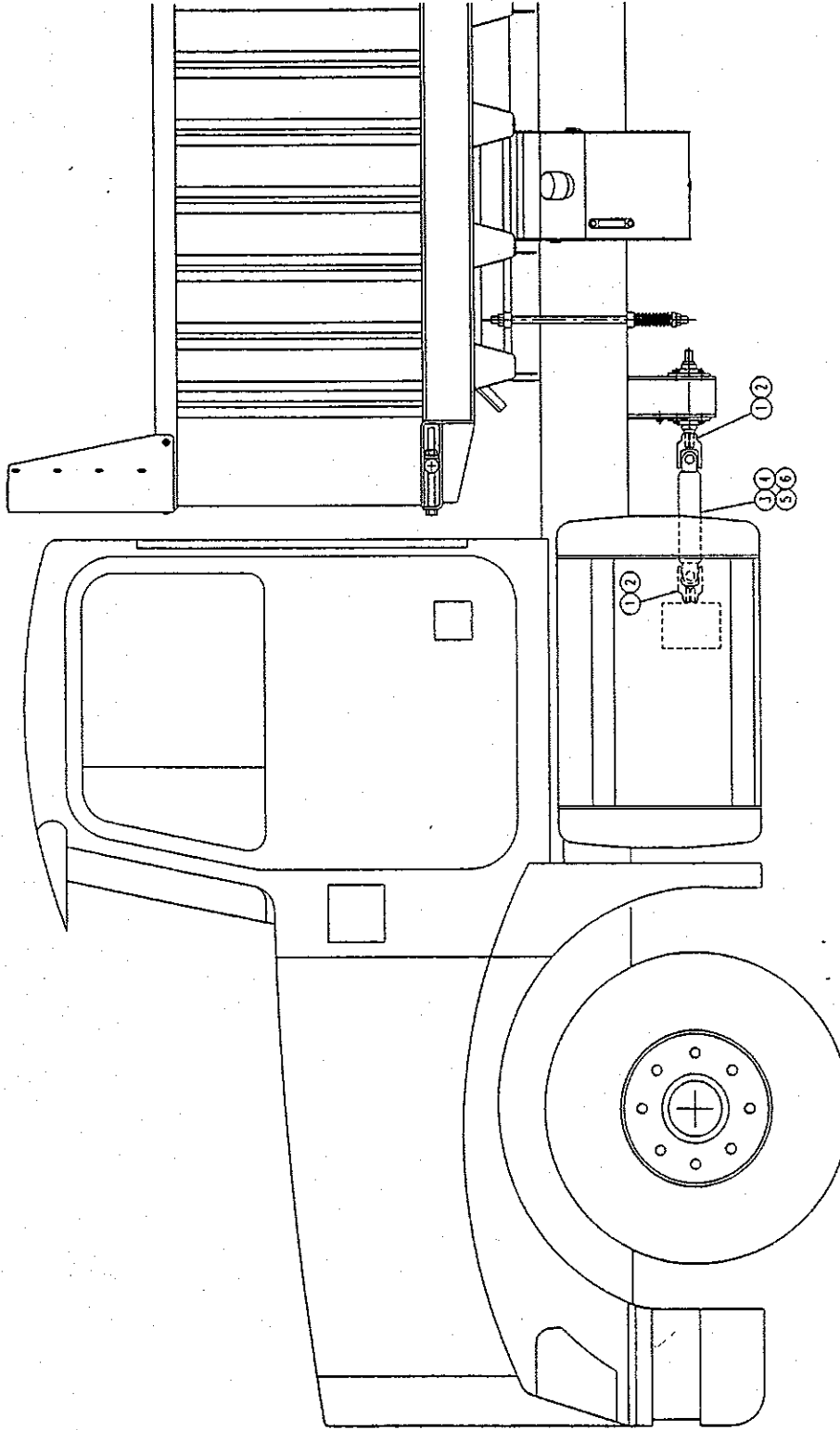
# MODEL 8420



ITEM	DESCRIPTION	QTY	UNIT	PRICE	EXT. PRICE	OPTIONAL EQUIPMENT
10	SPRING-RIDE OPTION / OPTIONAL	1				
11	WARRANTY SPREADER ASSEMBLY	1				
12	HYDRAULIC ASSEMBLY	1				
13	FRAME / PROPULSION ASSEMBLY	1				
14	WHEEL 16.1 X 16 8 INCH	4				
15	TIRE 7.5 X 16 14.1 INCH	4				
16	MECHANICAL DRIVE SHAFT ASSEMBLY	1				
17	WHEEL HOUSING	1				
18	WHEEL HOUSING	1				
19	WHEEL HOUSING	1				
20	WHEEL HOUSING	1				
21	WHEEL HOUSING	1				
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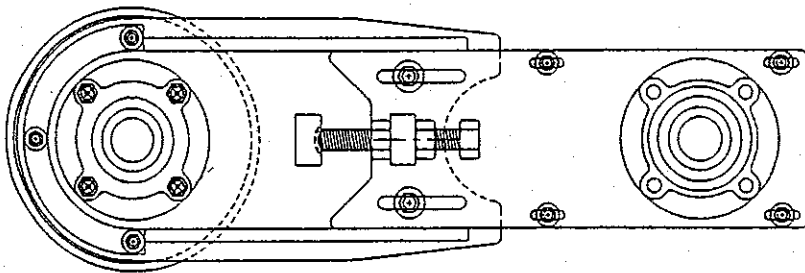
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 PART NO: 28-71 WARRIOR BOX  
 PULL TYPE / SPREADER  
 00001 01 - 00002A 00

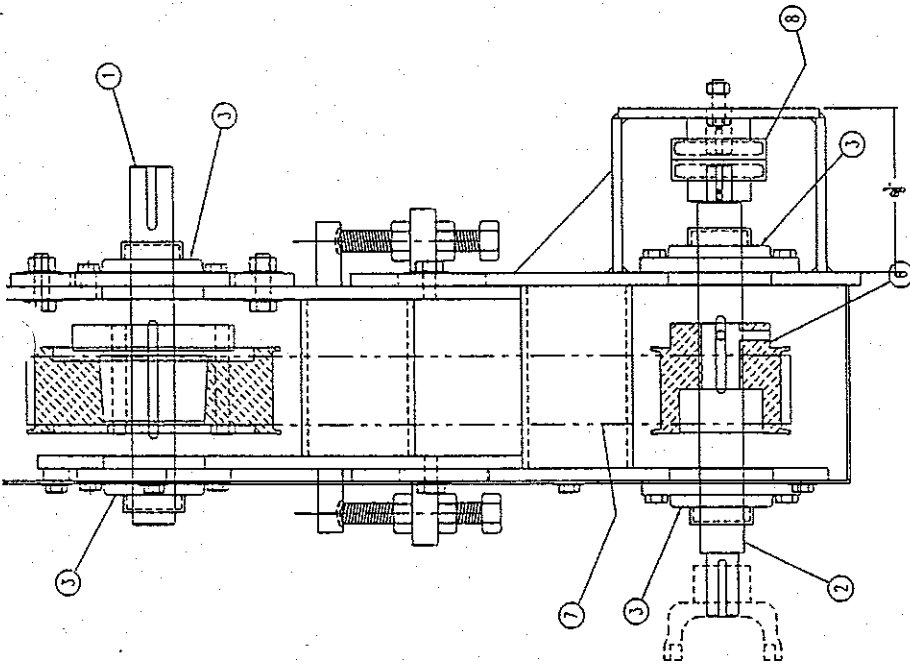


<input checked="" type="checkbox"/> L.H.	<input checked="" type="checkbox"/> R.H.	<b>DRKS</b> MANUFACTURING CO.
SCALE: 1 : 8	DESIGN APPRO. BY:	DRAWN BY: <i>WJL</i>
DATE: 12 MAR 97	CHECK BY:	
PART USED ON: 20-T MANURE BOX W/ 18763		PTO TO TY DRIVE
REV. CLASS		DATE
18763		0000101-196900
0002		0002

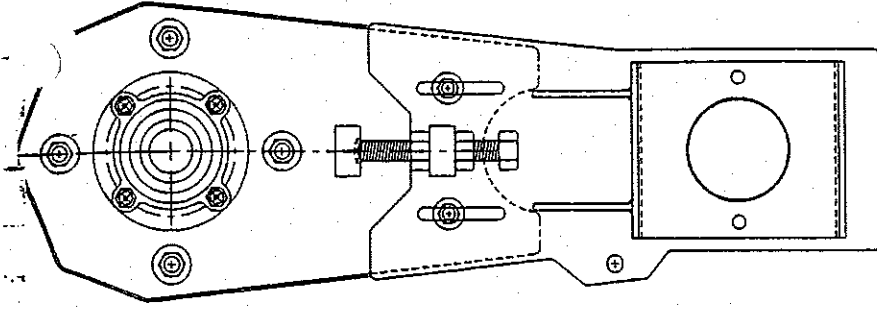
ITEM	DESCRIPTION	PART No.	QTY	B.P. No.	REC. #
6	SLIP YOKE	61012010	1		
5	SLIP SHUB	61012020	1		
4	DRIVE SHAFT TUBING	61012040	1		
3	TUBE YOKE	61012030	1		
2	U-JOINT	61012060	2		
1	END YOKE	61012050	2		



FRONT VIEW ASSEMBLY  
(NO COVER, PULLEY, OR BEARING)

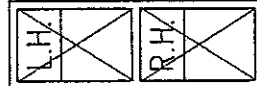


CROSS SECTION  
SIDE VIEW ASSEMBLY  
(COVER CROSS SECTIONED)



REAR VIEW  
(PARTS REMOVED)

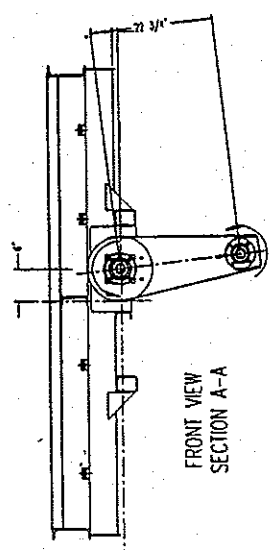
QTY	PART No.	DESCRIPTION	B.P. No.	REC.
1	30231018	CHAIN COUPLING ASSEMBLY 50-66		
1	60171220	POLYCHAIN BELT - GATES 14M-1750-68		
1	30223085	PULLEY - POLYCHAIN 28 TOOTH		
1	60139064	BUSHING 1-3/4" BORE SHAFT		
1	60139062	PULLEY - POLYCHAIN 56 TOOTH		
4	60116370	FLANGE CART-4 BOLT 1-3/4		
1	30231015	INPUT SHAFT		
1	30231016	OUTPUT SHAFT		



**DIRKE**  
MANUFACTURING LTD.

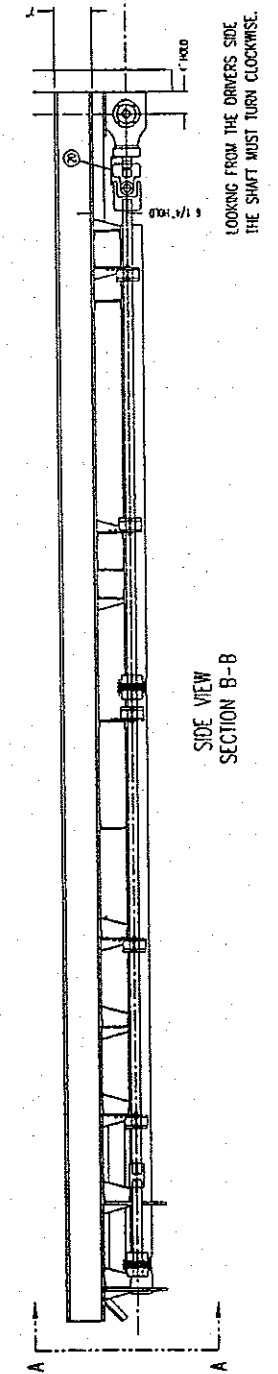
SCALE: 1 : 3  
DATE: 21 JAN 99  
DESIGN APPR. BY: *MM*  
DRAWN BY: *MM*  
CHECK BY:

POWER TRANSFER BOX ASSEMBLY  
20FT MANURE BOX  
FIRST USED ON:  
PROJ. CLASS: 0000  
DRAWING NUMBER: 01-23002D  
CHANGE: 00



FRONT VIEW  
SECTION A-A

LOOKING FROM THE FRONT TOWARDS THE BACK  
THE TY-DRIVE INPUT SHAFT MUST TURN COUNTER CLOCKWISE

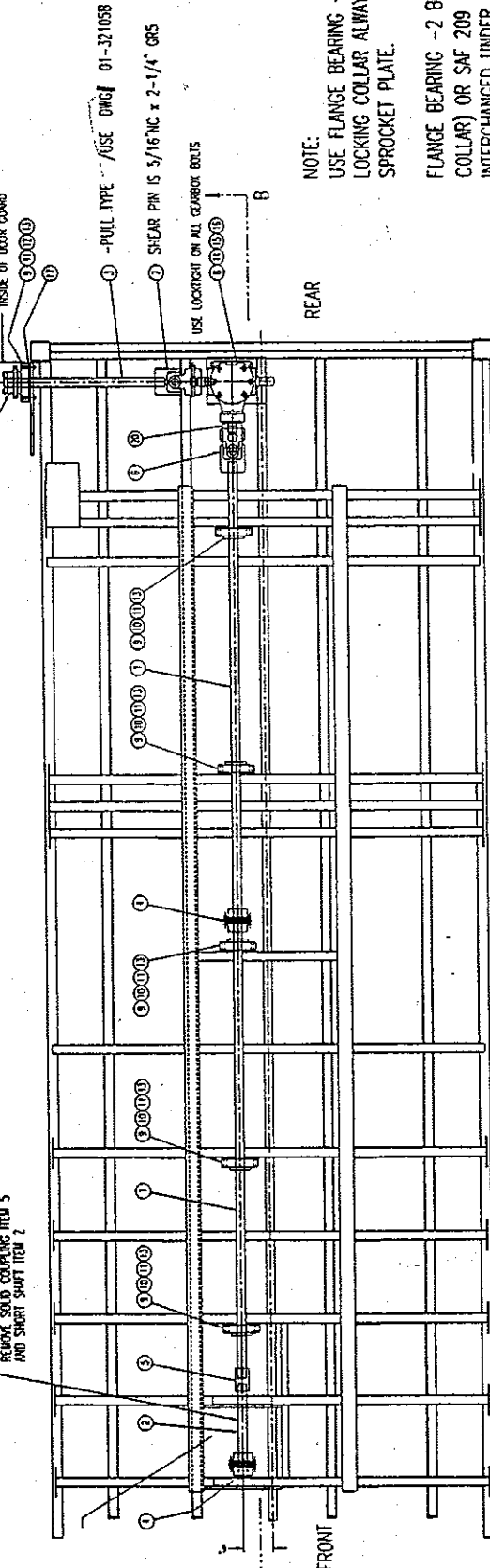


SIDE VIEW  
SECTION B-B

LOOKING FROM THE DRIVERS SIDE  
THE SHAFT MUST TURN CLOCKWISE

DO NOT USE NEVER SIZE ON UPPER LOCK!  
INSIDE OF DOOR CLAUD

FOR VERTICAL DRIVE POSITION 12  
REMOVE SCREW COMPING ITEM 5  
AND SHAFT SHAFT ITEM 2



BOTTOM VIEW (LOOKING FROM THE GROUND UP)

NOTE:  
USE FLANGE BEARING - 2 BOLT (MANFL 209)  
LOCKING COLLAR ALWAYS AT OUTPUT DRIVE  
SPROCKET PLATE.

FLANGE BEARING - 2 BOLT MANFL 209 (LOCK  
COLLAR) OR SAF 209 (SET SCREW) CAN BE  
INTERCHANGED UNDER FLOOR BED

60290950 ?

6029010 ?

**DIRKE**  
MANUFACTURING LTD.

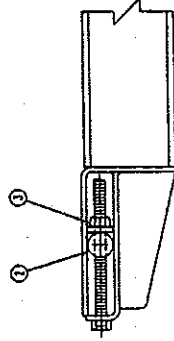
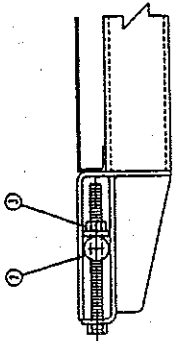
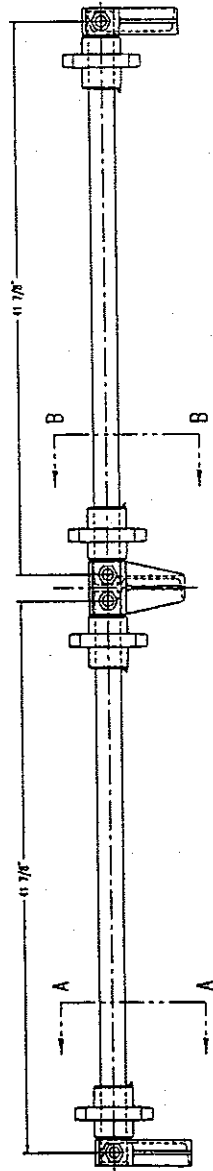
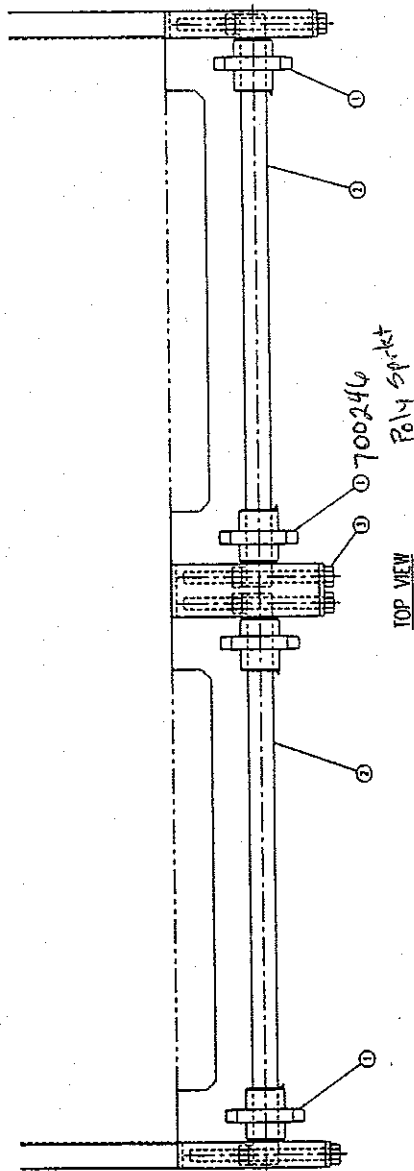
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DATE: 6 NOV 99  
DRAWN BY: [Signature]  
CHECK BY: [Signature]

Mechanical Drive Assy

20-FT MANURE BOX W/ 19282 0000 01-32066D 00

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	U-JOINT COVER PLATE	1	10	BOLT NC GRS PLD 1/2 X 2	6
2	BUSHING-TAPER / 1 3/4 BORE - 01	1	11	FLANGE-2BOLT 1-3/4 (MANFL 209)	6
3	SPROCKET H100014	1	12	GEARBOX - 1:1	1
4	BEARING SPACER PLATE	1	13	YORK ASSY - OVERRUNNING CLUTCH/SHEAR BOLT G2400	1
5	WASHER - LOCKING PLD 5/8	4	14	YORK ASSY - U-JOINT G2400	1
6	WASHER - FLAT CUT PLD 5/8	4	15	COUPL SLEEVE 1-3/4 X 4-1/2 LG	2
7	BOLT NC GRS PLD 5/8 X 1-3/4	4	16	CHAIN COUPLING ASSEMBLY	1
8	WASHER - FLAT CUT PLD 1/2	12	17	OUTPUT DRIVE SHAFT	1
9	BOLT NC GRS PLD 1/2 X 2-1/2	2	18	MAIN DRIVE SHAFT EXTENSION	1
10	NUT - INLOCK NC PLD 1/2	12	19	WASH DRIVE SHAFT	2



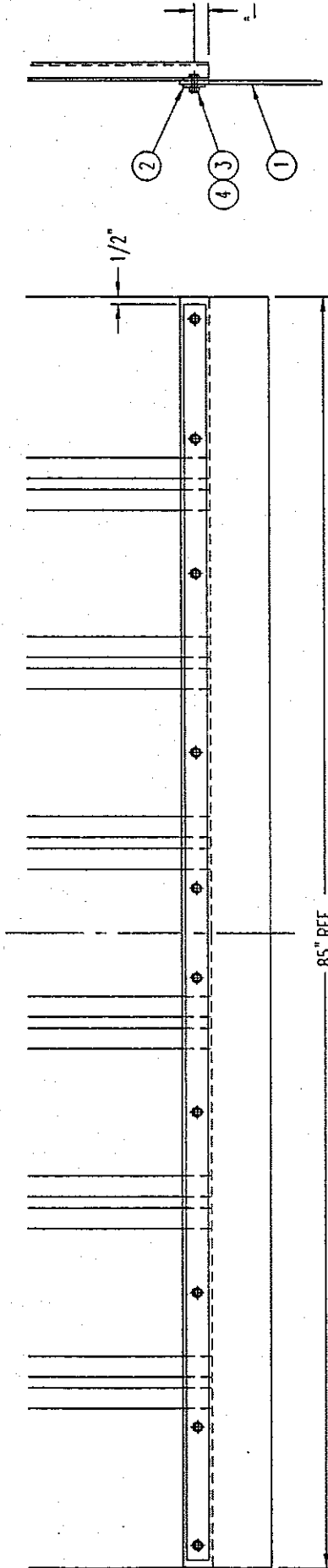


REV	DESCRIPTION	DATE	BY	CHKD	APP'D	QTY	UOM	STOCK NO.	WGT.	VAL.
1	ISSUED FOR PRODUCTION					1	EA			
2	REVISION					2	EA			
3	REVISION					3	EA			
4	REVISION					4	EA			
5	REVISION					5	EA			
6	REVISION					6	EA			
7	REVISION					7	EA			
8	REVISION					8	EA			
9	REVISION					9	EA			
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29	REVISION					29	EA			
30	REVISION					30	EA			

**DRIVE**

SCALE: 1:5  
 DATE: 18 JUN 95  
 DRAWN BY: [ ]  
 CHECKED BY: [ ]  
 FRONT TENSIONER ASSEMBLY  
 PART NO. 700246  
 REV: 01-174260 (00)





ITEM	DESCRIPTION	PART No.	B.P. No.	REQ.	κ
4	NUT - NYLOCK NC PLTD 3/8	50241012		10	
3	BOLT NC GR5 PLTD 3/8 X 1-1/4	50011078		10	
2	SLOPE SEAL BAR	01-20902B		1	
1	SLOPE SEAL BELT	01-20901B		1	

L.H.  R.H.

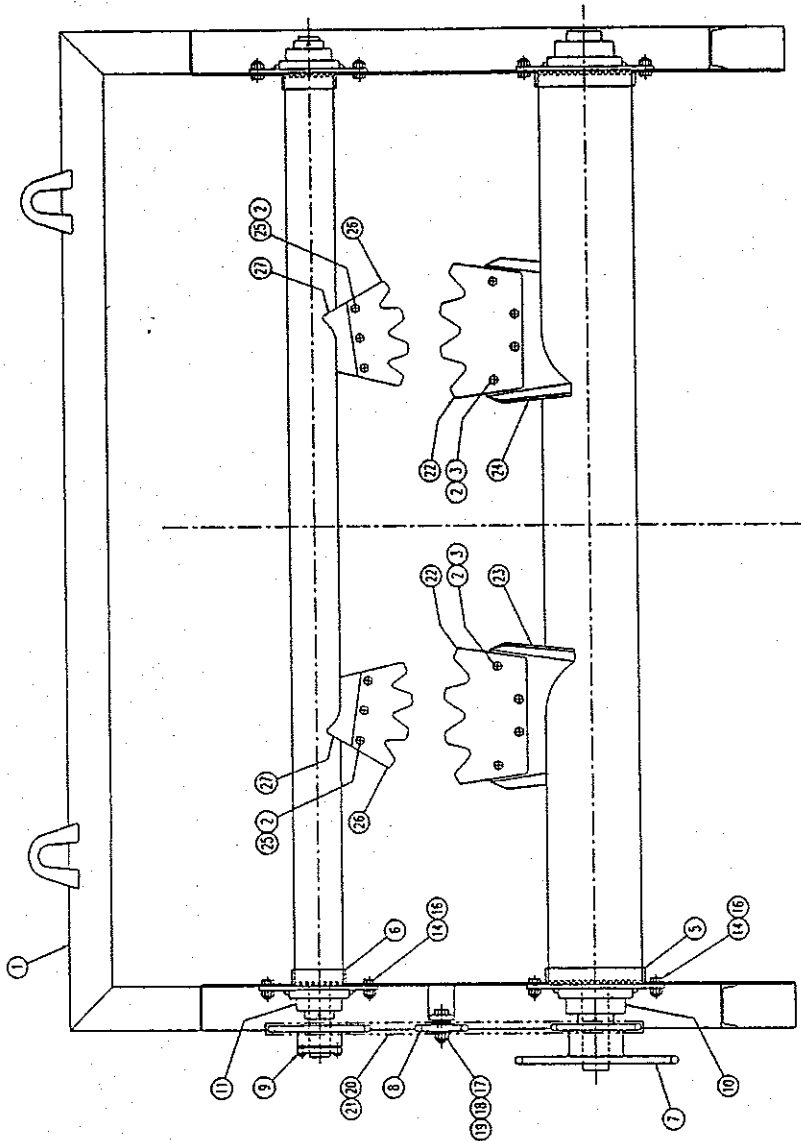
**DIRKS**  
MANUFACTURING LTD.

SCALE: 1 : 8  
DATE: 17 SEP 97  
DESIGN APPR. BY:  
DRAWN BY: DIRKS ENG.  
CHECK BY:

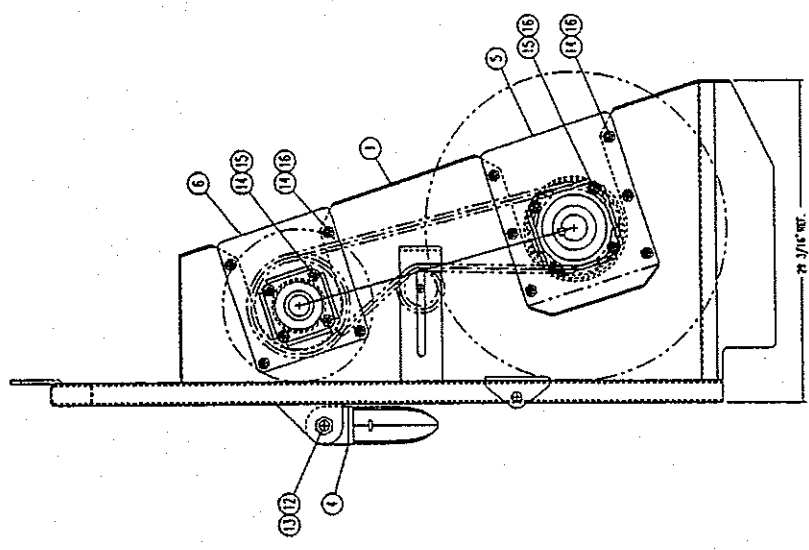
FIRST USED ON:  
20-FT MANURE BOX WO# 19282

PROG. CLASS: 0000  
DRAWING NUMBER: 01-20900B  
CHANGE: 00

SLOPE SEAL ASSEMBLY



REAR VIEW CROSS SECTION

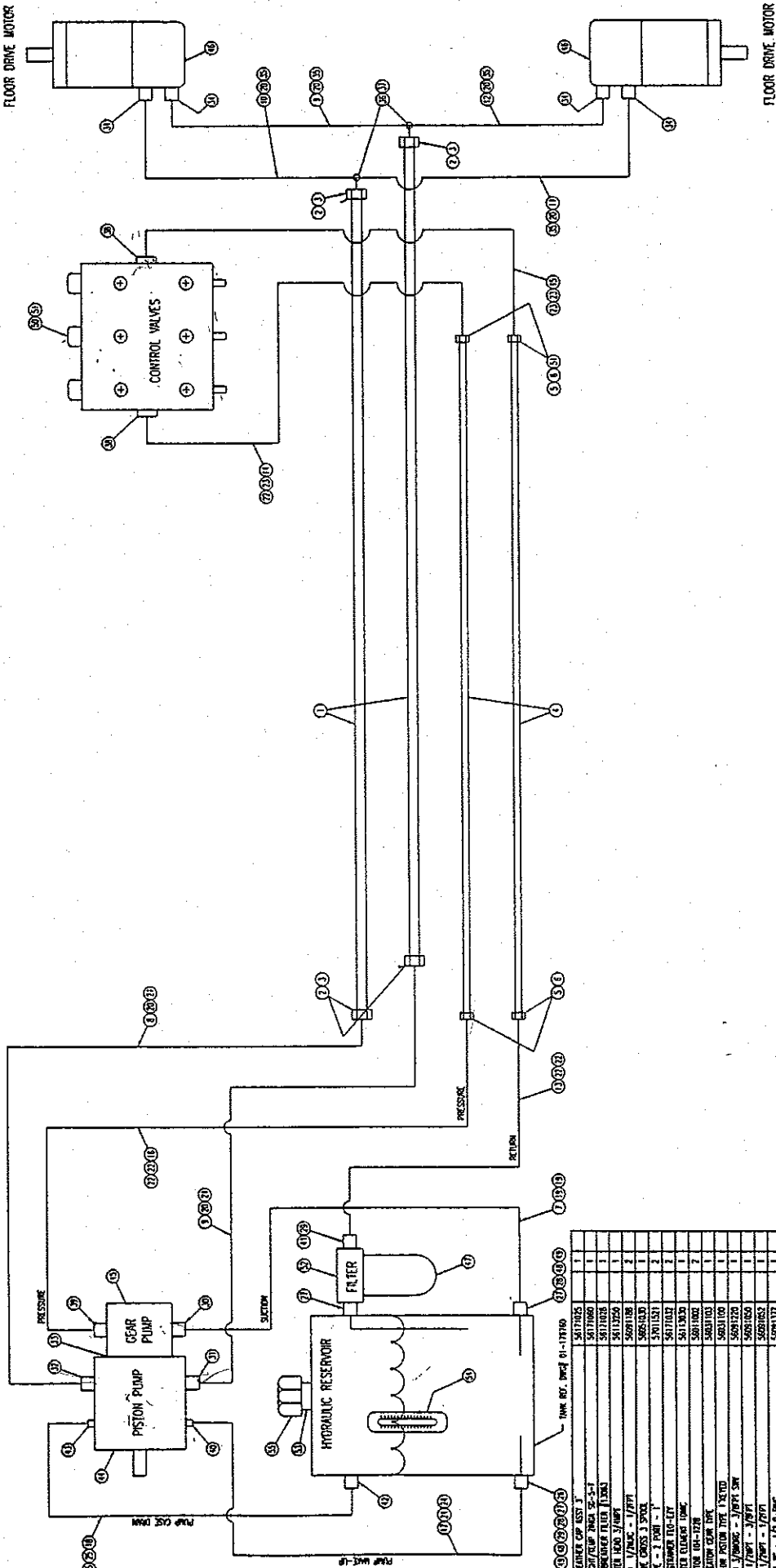


SIDE VIEW

**DRK**  
 DRAWN BY: *RW*  
 CHECK BY:  
 DATE: 15 NOV 99  
 SCALE: 1 : 6  
 PART NO. OF MANURE SPREADER: 0000 01 - 23003D 00  
 DRAWING NO. OF MANURE SPREADER ASSEMBLY: 0000 01 - 23003D 00

ITEM	DESCRIPTION	QTY	PART NO.	B.P. NO.	REQ.
1	SPREADER CHASSIS ASSEMBLY	1	01-17539D		1
2	NUT - SLOVER "C" NC PLD 1/2	168	50281006		168
3	BOLT NC GR5 PLD 3/2 X 1-1/2	96	50011550		96
4	DROP-IN HINGE ASSEMBLY	2	01-17580D		2
5	BOTTOM BEARING PLATE	2	01-17581B		2
6	TOP BEARING PLANE	2	01-17582B		2
7	DOUBLE SPROCKET	1	30225010		1
8	SPROCKET H800A-17 X 3/4 IDLER	1	60137195		1
9	SPROCKET 8002B X 1 15/16 KEYS	1	60116560		1
10	FLANGE-BOLT 2-7/16 (MANF 212-39)	2	60116460		2
11	FLANGE-BOLT 1-15/16 (SAF 210)	2	60116460		2
12	BOLT NC GR5 PLD 1 X 3-1/2	2	50011290		2
13	NUT - W/LOCK NC PLD 1"	2	50241026		2

ITEM	DESCRIPTION	QTY	PART NO.	B.P. NO.	REQ.
14	BEATER PADBLE - TOP	24	30231140		24
15	BEATER PADBLE - BOTTOM	24	30231120		24
16	BOLT NC GR5 1/2 - 1-1/4	72	30231130		72
17	PADBLE BRACKET - BOTTOM RH	12	30231160		12
18	PADBLE BRACKET - BOTTOM LH	12	30231150		12
19	PADBLE PADBLE - BOTTOM	24	30231130		24
20	CON LINK /80	1	60151022		1
21	CHAIN ROLLER R/W/ED /80	1	60151020		1
22	WASHER - FLAT CUT PLD 3/4	6	50421016		6
23	NUT - W/LOCK NC PLD 3/4	1	50241022		1
24	BOLT NC GR5 PLD 3/4 X 3	1	50011234		1
25	BOLT NC GR5 PLD 5/8 X 1-1/2	20	50011188		20
26	BOLT NC GR5 PLD 5/8 X 2	16	50011192		16
27	NUT - W/LOCK NC PLD 5/8	36	50241020		36

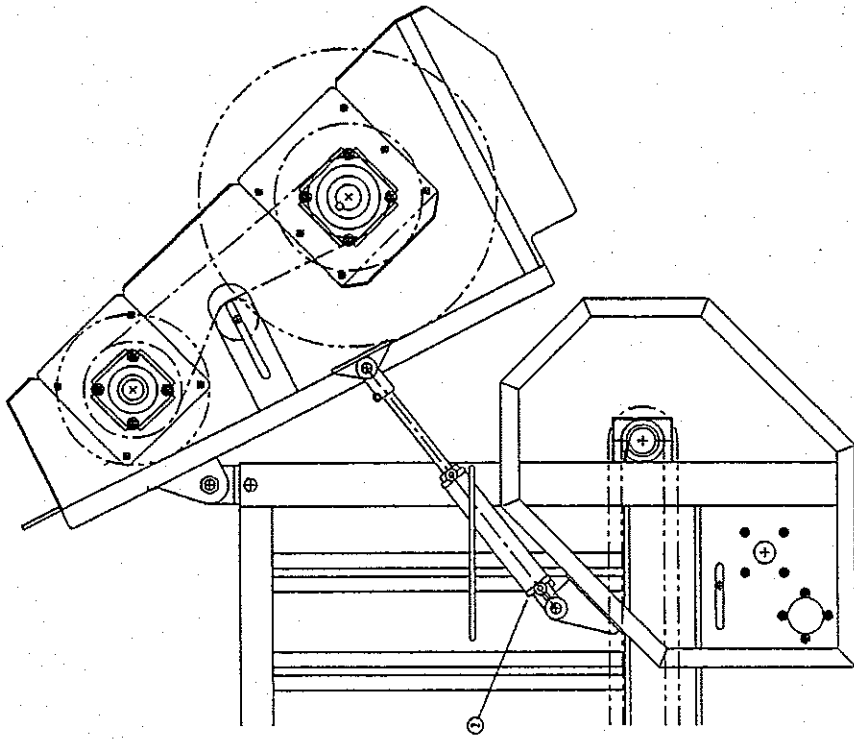


MANUFACTURE BOX HYDRAULICS ASSEMBLY	01-196950-00
70-FT MANURE BOX W/47 1/2" DIA	
DATE	12 MAR 57
SIZE	1:1
DRAWN BY	JAMES H. DIXIE, ENGR.

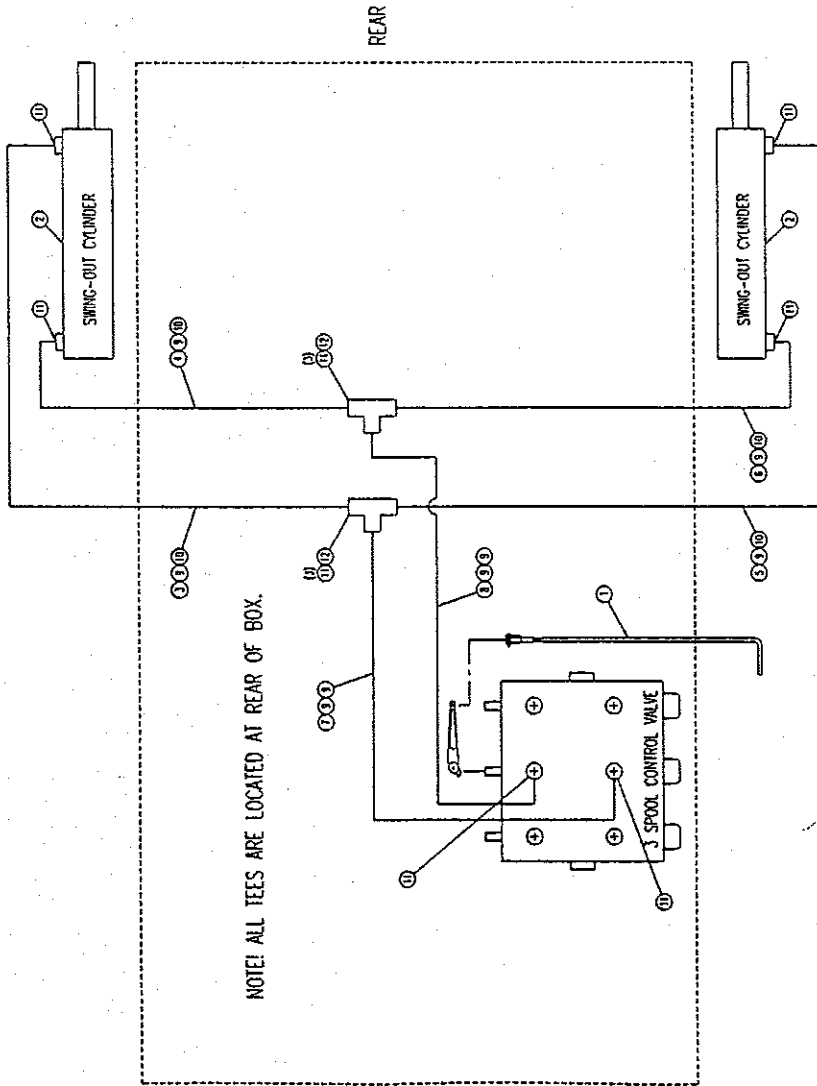
10	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
9	HOSE 1/2" I.D. x 3/4" O.D.	2	5601124		
8	HOSE 1/2" I.D. x 5/8" O.D.	1	5601124		
7	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
6	TUBE 1/2" I.D. x 1/2" O.D.	1	5601124		
5	TUBE 1/2" I.D. x 3/4" O.D.	1	5601124		
4	TUBE 1/2" I.D. x 1/2" O.D.	2	5601124		
3	TUBE 1/2" I.D. x 3/4" O.D.	1	5601124		
2	TUBE 1/2" I.D. x 1/2" O.D.	1	5601124		
1	TUBE 1/2" I.D. x 3/4" O.D.	1	5601124		

31	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
30	HOSE 1/2" I.D. x 1/2" O.D.	6	5601124		
29	HOSE 1/2" I.D. x 3/4" O.D.	2	5601124		
28	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
27	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
26	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
25	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
24	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
23	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
22	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
21	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
20	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
19	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
18	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
17	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
16	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
15	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
14	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
13	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
12	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
11	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
10	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
9	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
8	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
7	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
6	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
5	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
4	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
3	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		
2	HOSE 1/2" I.D. x 1/2" O.D.	1	5601124		
1	HOSE 1/2" I.D. x 3/4" O.D.	1	5601124		

HYDRAULIC SYSTEM



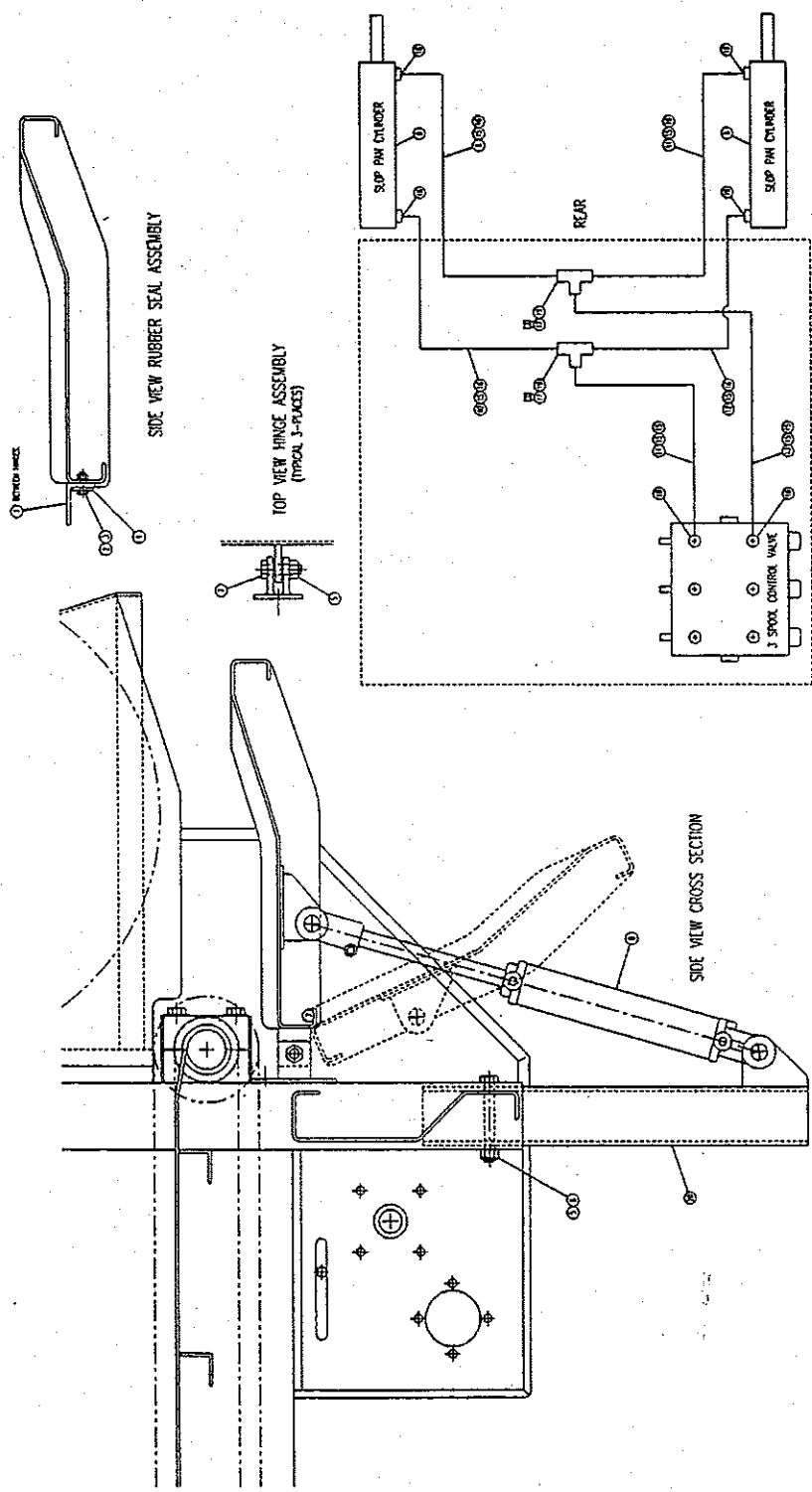
SIDE VIEW OPEN POSITION



NOTE! ALL TEES ARE LOCATED AT REAR OF BOX.

ITEM	DESCRIPTION	PART No.	Q.P. No.	REQ. 1.
10	HOSE END 1/2" BUC - 1/2" BUC	56091262		4
9	HOSE END 3/8" AC 30DEG	56091271		8
8	HOSE END 3/8" x 30" LG.	56091260		1
7	HOSE END 1/2" x 13" LG.	56091260		1
6	HOSE END 3/8" x 60" LG.	56091260		1
5	HOSE END 3/8" x 72" LG.	56091260		1
4	HOSE END 3/8" x 63" LG.	56091260		1
3	HOSE END 3/8" x 51" LG.	56091260		1
2	HOSE END 3/8" x 51" LG.	56091260		1
1	URAGE ASSY / END SWING OUT	30231100		2
12	TEE 50 3/8" BPT	56091058		2
11	CONN STR 3/8" BUC - 3/8" BPT	56091165		12

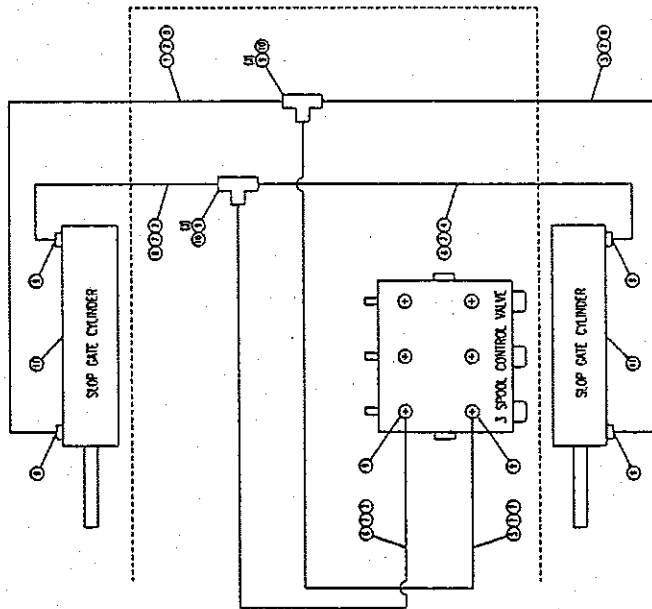
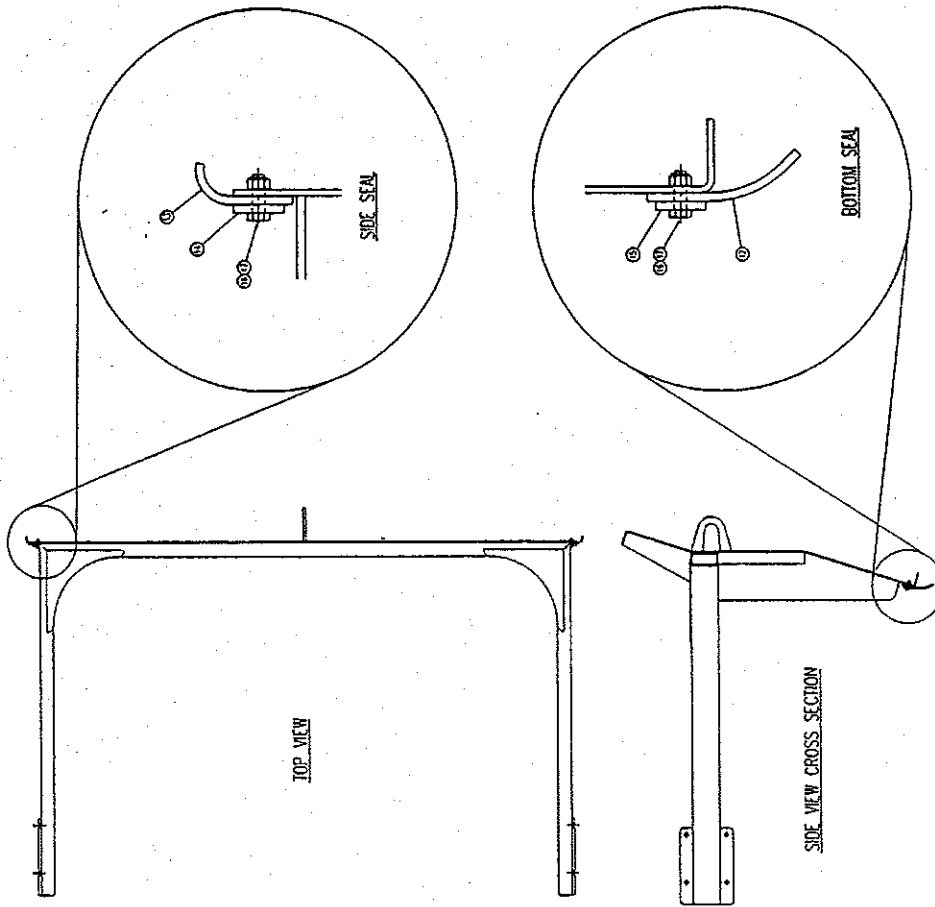
		SCALE: 1 : 5	DATE: 17 MAR 97	DESIGN BY: <i>WBE</i>	CHECK BY:
		PREPARED BY: <i>R.H.</i>		PART No. 0000101 - 19699D100	
20-FT SWING-OUT OPTION		20-FT SWING-OUT OPTION			



ITEM	DESCRIPTION	QTY	REF. NO.	REQ. 1
20	CYLINDER LUB. INSERT	1		
19	TEL. 50 1/4"PI	2	01-176168	
18	CONK SIR 1/4"NIC - 3/8"PI	2	56091086	
17	CONK SIR 1/4"NIC - 1/4"PI	6	56091160	
16	HOSE END 1/4"NIC - 1/4"SW	4	56091269	
15	HOSE END 1/4"NIC SW-1/4" 90°LG	8	56091318	
14	HOSE HND 1/4" x 37" LG	1	56091258	
13	HOSE HND 1/4" x 35" LG	1	56091258	
12	HOSE HND 1/4" x 14" LG	1	56091258	
11	HOSE HND 1/4" x 50" LG	1	56091258	
10	HOSE HND 1/4" x 61" LG.	1	56091258	
9	HOSE HND 1/4" x 68" LG.	1	56091258	
8	HDR-CY 7/8 BORE X 8 S/BOME	2	56071018	
7	BOLT NC CRS PLTD 5/8 X 2-1/2	3	50011196	
6	BOLT NC CRS PLTD 5/8 X 5	2	5001208	
5	NUT - NYLOCK NC PLTD 5/8	5	50241020	
4	ANGLE SEAL RING	2	01-176168	
3	NUT - NYLOCK NC PLTD 3/8	10	50241012	
2	BOLT NC CRS PLTD 3/8 X 1-1/4	10	50011078	
1	RUBBER-SEAL 2-3/8" x 5/8" x 1/4" FT x 12" LG.	2	53011012	
			PART No.	QTY. REQ. 1

**DIRKS**

SCALE: 1 : 3  
 DATE: 12 MAR 97  
 DRAWN BY: JWB  
 CHECK BY:  
**SLOP PAN OPTION**  
 PART No. 0000 01 - 197000 00  
 20-FT MANURE BOX NO. 18763



ITEM	QTY	DESCRIPTION	PART NO.	BP. NO.	REQ.
17	2	NUT - RYLOCK MC P10 3/8	56091088		2
16	17	9011 MC OS P10 3/8 X 1-1/4	56091165		17
15	1	BOTTOM RETAINER BAR	56091292		4
14	2	SPAC RETAINER BAR	56091271		8
13	2	BELTING (RUBBER) 1/4 X 1 X 30"	56091260		1
12	1	BELTING (RUBBER) 1/4 X 1 X 85"	56091260		1
11	2	PROP-CYL 3 BORE X 10 STROKE	56091260		1
9	1	CONN STR 3/8x3/8 MC 3/8x1	56091088		2
8	8	HOSE END 3/8 MC 3/8	56091260		1
7	1	HOSE END 3/8 MC 3/8	56091260		1
6	1	HOSE END 3/8 MC 3/8	56091260		1
5	1	HOSE END 3/8 MC 3/8	56091260		1
4	1	HOSE END 3/8 MC 3/8	56091260		1
3	1	HOSE END 3/8 MC 3/8	56091260		1
2	1	HOSE END 3/8 MC 3/8	56091260		1
1	1	HOSE END 3/8 MC 3/8	56091260		1

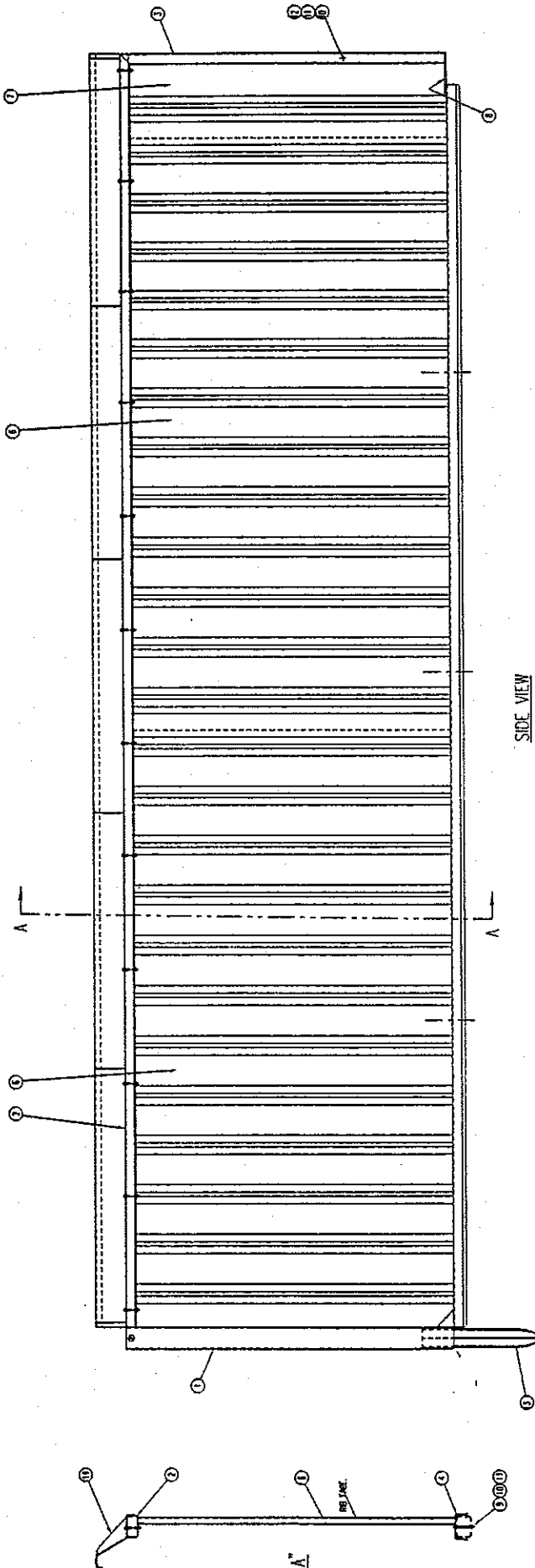
**DRKS**  
MANUFACTURING CO.

SCALE: 1 : 15  
DATE: 17 MAR 97  
DRAWN BY: *WUC*  
CHECK BY:

STOP GATE OPTION

PART NO: 000001  
REV: 01  
DATE: 18763  
JOB NO: 197010





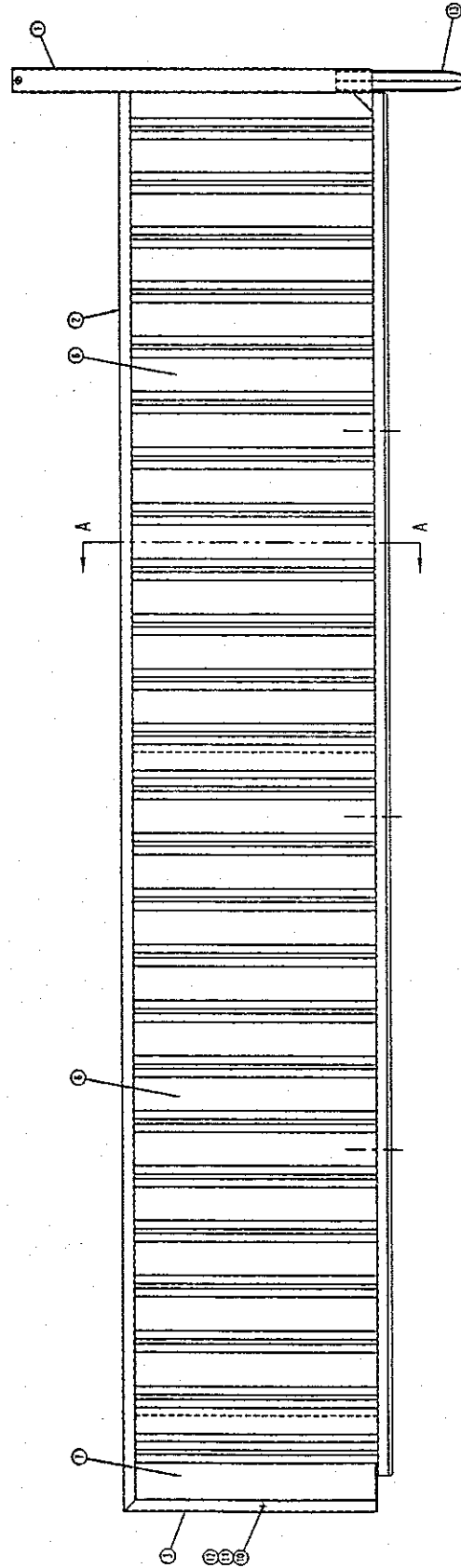
SIDE VIEW

SECTION "A-A"  
INSIDE OF BOIL

NO.	DESCRIPTION	QTY	UNIT	REF. NO.	REV.	DATE	BY	CHKD.
10	WALL - W/LOCK MC. FOLD 3/8"	1	PC	50711012				
9	BOIL MC. CRS. FOLD 3/8" X 4"	1	PC	50711100				
8	FILLER BAR	1	PC	01-123456				
7	WALL PANEL - FRONT	1	PC	01-123456				
6	WALL PANEL	1	PC	01-123456				
5	CORNER BRACKET	1	PC	01-123456				
4	RIB CAP	1	PC	01-123456				
3	FRONT RIB	1	PC	01-123456				
2	RIP BAR	1	PC	01-123456				
1	RIP CORNER RIB	1	PC	01-123456				
14	TOP RIB COLLAR	1	PC	01-123456				
13	SCREW - WALL ASSMBLY	1	PC	01-123456				
12	BOIL MC. CRS. FOLD 3/8" X 4"	1	PC	50711100				
11	WASHER - 1/4" OD FOLD 3/8"	1	PC	50711005				

**DMK**  
 DRAWING NO. 50711005  
 SCALE: 1" = 10"  
 DATE: 13 JUN 95  
 PROJECT: PASSENGER SIDE WALL EXTENSION  
 SHEET NO. 1 OF 1  
 (0000) 01-320690 03





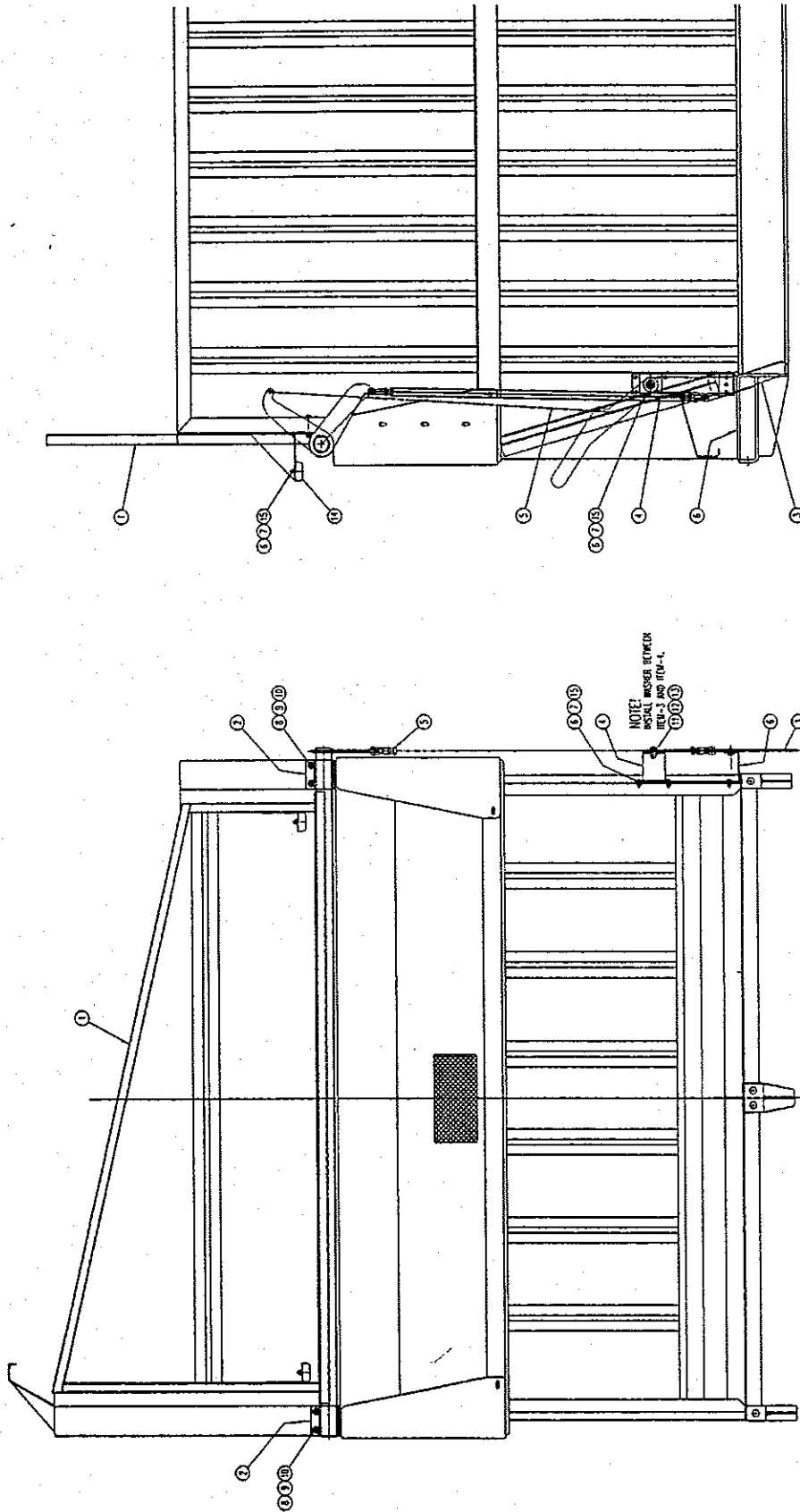
SIDE VIEW

SECTION "A-A"  
INSIDE OF BOX

TOP FACE

NO	DESCRIPTION	QTY	UNIT	REF
10	WALL PANEL - FRONT	1	EA	10
11	WALL PANEL - REAR	1	EA	11
12	WALL PANEL - FRONT	1	EA	12
13	WALL PANEL - REAR	1	EA	13
14	WALL PANEL - FRONT	1	EA	14
15	WALL PANEL - REAR	1	EA	15
16	WALL PANEL - FRONT	1	EA	16
17	WALL PANEL - REAR	1	EA	17
18	WALL PANEL - FRONT	1	EA	18
19	WALL PANEL - REAR	1	EA	19
20	WALL PANEL - FRONT	1	EA	20
21	WALL PANEL - REAR	1	EA	21
22	WALL PANEL - FRONT	1	EA	22
23	WALL PANEL - REAR	1	EA	23
24	WALL PANEL - FRONT	1	EA	24
25	WALL PANEL - REAR	1	EA	25
26	WALL PANEL - FRONT	1	EA	26
27	WALL PANEL - REAR	1	EA	27
28	WALL PANEL - FRONT	1	EA	28
29	WALL PANEL - REAR	1	EA	29
30	WALL PANEL - FRONT	1	EA	30
31	WALL PANEL - REAR	1	EA	31
32	WALL PANEL - FRONT	1	EA	32
33	WALL PANEL - REAR	1	EA	33
34	WALL PANEL - FRONT	1	EA	34
35	WALL PANEL - REAR	1	EA	35
36	WALL PANEL - FRONT	1	EA	36
37	WALL PANEL - REAR	1	EA	37
38	WALL PANEL - FRONT	1	EA	38
39	WALL PANEL - REAR	1	EA	39
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96	WALL PANEL - FRONT	1	EA	96
97	WALL PANEL - REAR	1	EA	97
98	WALL PANEL - FRONT	1	EA	98
99	WALL PANEL - REAR	1	EA	99
100	WALL PANEL - FRONT	1	EA	100

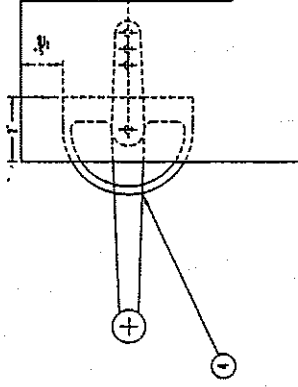
SCALE: 1:10
   
 DATE: 13 JUN 96
   
 DRAWING NO. 000001-320700.00
   
 PART NO. 000001-320700.00
   
 EXTENSION KIT



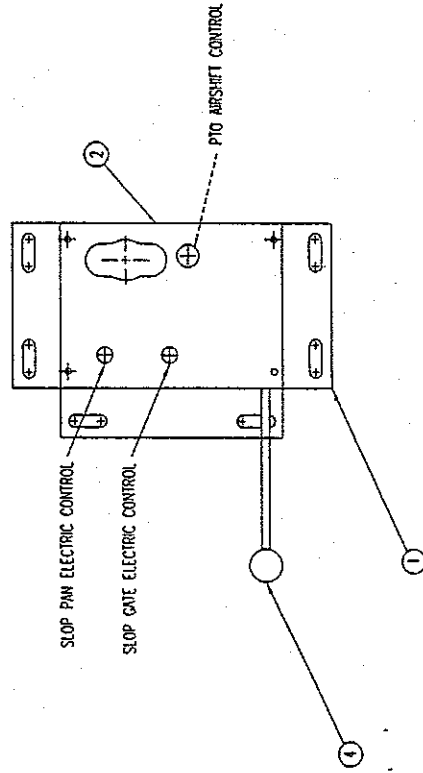
FRONT VIEW

REV	DATE	BY	CHKD	DESCRIPTION	QTY	UNIT	ASSEMBLY	QTY	UNIT	ASSEMBLY
15				WASHER - 1/4" DIA. 3/16"	1					
14				DOOR-STRIKE-ROCKER 2-1/2" [800]	1					
13				WASHER - 1/4" DIA. 3/16"	1					
12				WASHER - 1/4" DIA. 3/16"	1					
11				WASHER - 1/4" DIA. 3/16"	1					
10				WASHER - 1/4" DIA. 3/16"	1					
9				WASHER - 1/4" DIA. 3/16"	1					
8				WASHER - 1/4" DIA. 3/16"	1					
7				WASHER - 1/4" DIA. 3/16"	1					
6				WASHER - 1/4" DIA. 3/16"	1					
5				WASHER - 1/4" DIA. 3/16"	1					
4				WASHER - 1/4" DIA. 3/16"	1					
3				WASHER - 1/4" DIA. 3/16"	1					
2				WASHER - 1/4" DIA. 3/16"	1					
1				WASHER - 1/4" DIA. 3/16"	1					

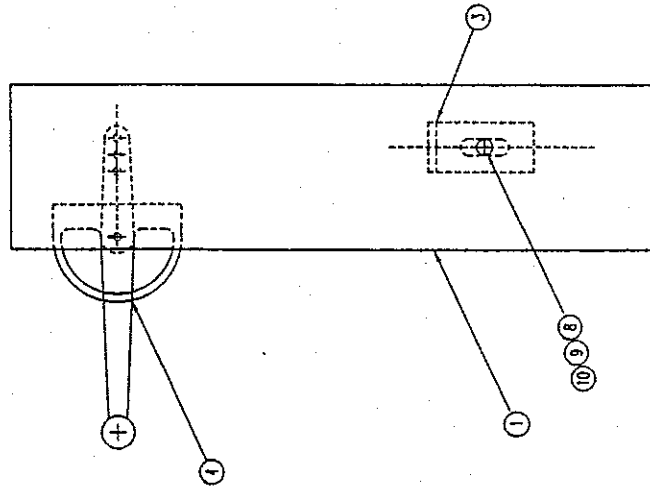
**DRK**  
 DRAWING DEPARTMENT  
 DATE: 29 NOV 99  
 CHKD: [Signature]  
 TITLE: FRONT FOLD-DOWN DOOR ASSEMBLY  
 PART NO. 0000 01 - 320 40 00  
 30-17 JANUARY BOX W/ 19781



HANDLE LAYOUT



TOP VIEW



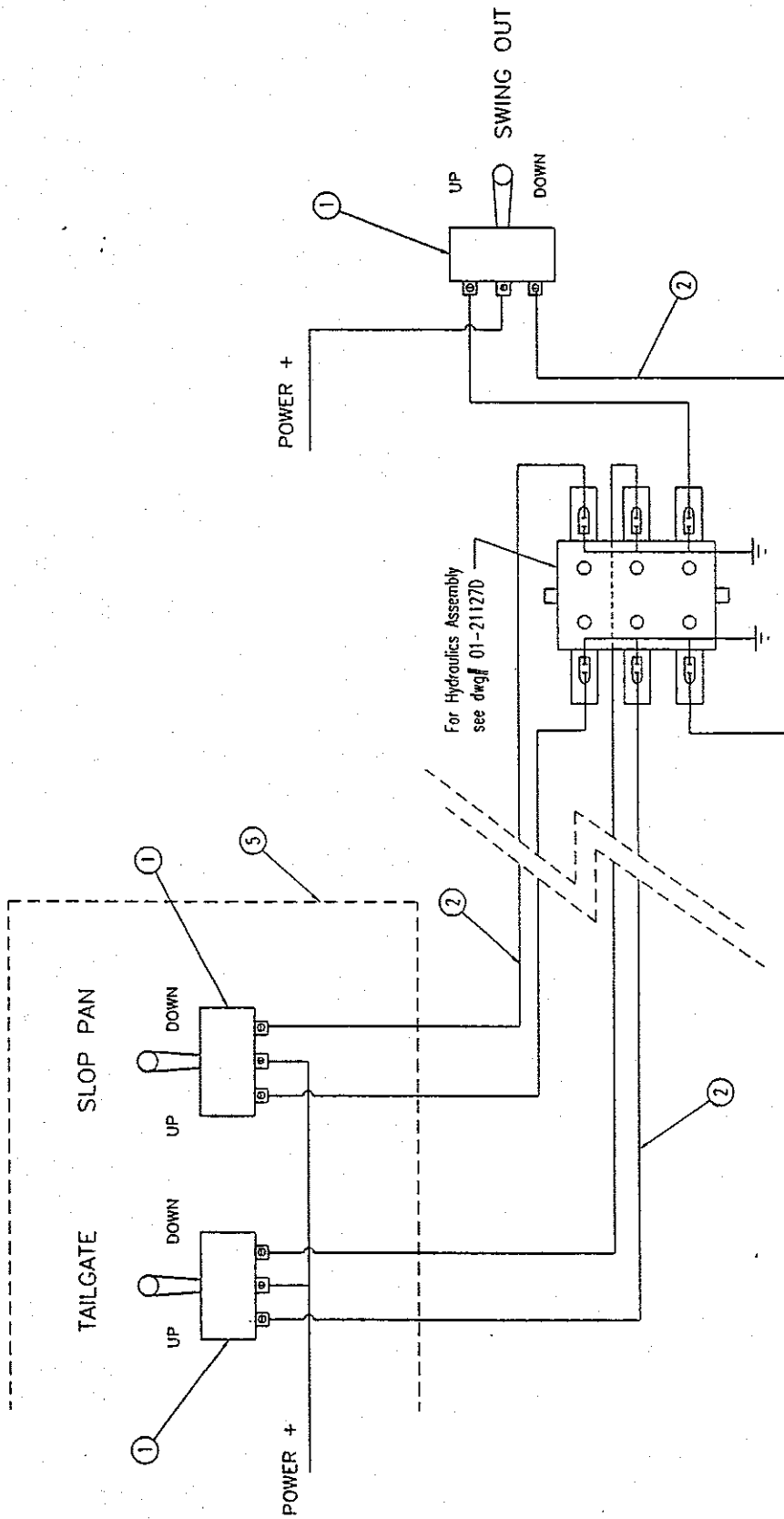
SIDE VIEW

REV	DESCRIPTION	DATE	BY	CHKD	APP'D	QTY	UNIT	LOC
10	INDEX - REF QTY P/D 1/2							
9	REV - BLOCK MC P/D 1/2							
8	REV - QTY P/D 1/2 1-1/4							
7								
6								
5								
4	CONTROL LEVER							
3	CABLE ANCHOR							
2	FACE PLATE							
1	MAIN FRAME							

**DRIVE**

SCALE: 1:2  
 DATE: 15 NOV 99  
 DRAWN BY: JAMES P. JONES, INC.  
 CHECK BY:  
 IN CAB CONSOLE  
 PART NO: 0000 01-370680  
 SUPPL: 0000 01-370680

IN CAB CONTROL



		DESIGN APPR. BY:	DRAWN BY: DIRKS ENG.
		SCALE: 1 : 2.4	CHECK BY:
L.H.		DATE: 05 JUL 99	
R.H.		ELECTRICAL CONTROLS ASSEMBLY	
FIRST USED ON:		PROD. CLASS	CHANGE
SUPERA		0000	01-32033B 00

ITEM	DESCRIPTION	PART No.	B.P. No.	REQ.	x
5	IN CAB CONSOLE	01-320680		1	
4	SPRING C163	60271600		1	
3					
2	WIRE 14GA 4-COND /FT	58031316		60	
1	MOMENTARY TOGGLE SWITCH	58071560		3	