Operator Manual

Silver Spreaders

MODELS H425 H575 H655 H755 V425 V575 V655 V755

LEON'S MFG. COMPANY INC.
P. O. Box 5002 135 York Road East Yorkton, Saskatchewan S3N 3Z4
1-800-667-1581
Facsimile: 306-782-1884

E-mail: sales@leonsmfg.com Website: www.leonsmfg.com
TABLE OF CONTENTS

DEALER/CUSTOMER INFORMATION .................................................. 1
WARRANTY ...................................................................................... 2
SAFETY ........................................................................................... 4
PRE-DELIVERY INSPECTION PAGE .................................................. 5
SAFETY DECAL LOCATION ............................................................... 6
OPERATION AND MAINTENANCE ..................................................... 11
DETAILS AND SPECIFICATIONS SUMMARY .................................... 23
DETACHABLE BEATER ASSEMBLY INSTRUCTIONS .......................... 29
SAFETY LIGHT KIT MOUNTING INSTRUCTIONS .............................. 35

NOTE: THIS MANUAL APPLIES TO ALL MODELS MANUFACTURED IN 2008 AND LATER. FOR UNITS MANUFACTURED EARLIER PLEASE CONTACT THE FACTORY.
DEALER / CUSTOMER INFORMATION

TO THE DEALER:

Warranty Registration
The warranty registration form must be completed and signed by both dealer and customer before or upon machine delivery. Give the owner his copy.

Pre-Delivery
Using the Pre-Delivery Inspection Report, be sure the spreader is completely set up, lubricated and in proper working order upon delivery to the customer.

Operator's Manual
The Operator's Manual is a very important part of the equipment purchase. With the use of the manual be sure to instruct the owner and operator regarding:

- Safety precautions
- Operation and adjustments
- Lubrication and maintenance

BE SURE to give this MANUAL to the OWNER.

TRANSPORTING
- Use a tractor with adequate power, adequate weight and with adequate towing and braking capacity to safely tow and handle the spreader.
- Always adjust the drawbar length to properly accommodate the PTO shaft as per the recommended connection specifications.
- Always use correct hitch pin size and secure the pin with a retainer clip or pin.
- Attach a transport safety chain between the tractor drawbar support and spreader hitch.
- Always lock tractor brake pedals together when traveling on a public road.
- Always make the necessary safety precautions prior to transporting spreader on public roads:
  - Be sure SMV (Slow Moving Vehicle) sign is mounted and clean and visible.
  - Use flashing warning lights, except where required by law. Ensure that they are clearly visible and in proper working condition.
- Comply with provincial or state and local laws and regulations governing highway safety when moving machinery.
- Use good judgment when transporting spreader on the highway. Maintain complete control of machine at all times.
- When traveling up or down steep grades, use extreme caution to prevent spreader from jackknifing, overturning or causing loss of control of the towing vehicle.

TO THE CUSTOMER:

Warranty Registration
Be sure to sign the registration form and keep a copy.

Know the Equipment
Before operating the spreader, read this operator's manual to become completely familiar with the machine.

Right and Left-Handed Sides of the Machine
Stand behind the machine and face the direction of travel to determine the right hand (RH) and left hand (LH) sides of the machine.

Serial Number
Record the spreader serial number. The dealer needs this information to order parts and process warranty claims.

Authorized Service
For factory authorized service and parts, see your dealer. The dealer's trained service staff uses the latest service techniques, and the parts personnel provide prompt delivery of quality parts.

SAFETY IS IMPORTANT!
- Develop and follow good safety procedures and encourage others to do the same.
- Always operate farm machinery in a careful, safe manner.
- Never attempt to clean, adjust or lubricate a machine while it is running.
- Always stop the PTO and shut off the engine before leaving the tractor seat.

WARNING!
IF LOADED SPREADER IS TOO HEAVY OR IS TOWED TOO FAST, LOSS OF CONTROL CAN OCCUR. DO NOT EXCEED SPEEDS AND TRACTOR/IMPLEMENT WEIGHT RATIOS LISTED BELOW.

- To ensure load does not exceed recommended weight ratio, add ballast to the tractor, reduce load size and/or increase tractor size.
- Stopping distance increases as weight, speed and ground slope increase. Stopping distance is adversely effected when towing on poor surface conditions and when turning. Always observe the following for towed equipment:
  - Do not exceed 32 kmh (20 mph)
  - Loaded implement weight must not be more than 1.5 times tractor weight.
WARRANTY
REGISTRATION (OWNER'S COPY)

Leon's Mfg. Company Inc. warrants all products manufactured by Leon's Mfg. Company Inc. for a period
of one year from the date of purchase for private use, or a period of 90 days for commercial use.
Leon's Mfg. Company Inc. warrants tires for a period of 60 days for private use or a period of 30 days for
commercial use.
This warranty provides that the equipment shall be free of defective materials and workmanship, or we
will replace or repair at our factory any part that our inspection shows to be defective.
If any product or portion thereof is modified, changed or tampered with in any way, this warranty shall be
deeded null and void.
All hydraulic cylinders, valves, hoses, tires, spindles and other purchased products, except as specifically
included in the warranty above, are not manufactured by Leon's and are, therefore, covered by the warranties of
the manufacturer of these products.
All parts shipped to the factory shall be shipped prepaid and will be returned F.O.B. Factory. Leon's Mfg.
Company Inc. does not assume responsibility for shipping, labour or travel expenses.
Although Leon's products are designed to minimize tractor strain, Leon's Mfg. Company Inc. will assume
no responsibility for damage to tractors or other equipment.
Leon's Mfg. Company Inc. reserves the right to make improvements and reserve the right to change the
design, materials and specifications without notice or obligation.

MODEL NO. __________________ DATE OF PURCHASE __________________

SERIAL NO. __________________ DEALER __________________

TOWN __________________ PROV. / STATE __________________

OWNER __________________ ADDRESS __________________

TOWN __________________ PROV. / STATE __________________

What make and model of tractor will this product be used with?- __________________

Will this product be used: commercially? ______
Privately? ______

Why did you buy Leon? Advertising ______
Previous Owner ______
Recommendation ______
Special Features ______

Comments:

NOTE: This warranty is effective only if the warranty registration is filled in and mailed by the
original purchaser within ten days after the date of delivery.
WARRANTY
REGISTRATION (MANUFACTURER'S COPY)

Leon's Mfg. Company Inc. warrants all products manufactured by Leon's Mfg. Company Inc. for a period of one year from the date of purchase for private use, or a period of 90 days for commercial use.
Leon's Mfg. Company Inc. warrants tires for a period of 60 days for private use or a period of 30 days for commercial use.
This warranty provides that the equipment shall be free of defective materials and workmanship, or we will replace or repair at our factory any part that our inspection shows to be defective.
If any product or portion thereof is modified, changed or tampered with in any way, this warranty shall be deemed null and void.
All hydraulic cylinders, valves, hoses, tires, spindles and other purchased products, except as specifically included in the warranty above, are not manufactured by Leon's and are, therefore, covered by the warranties of the manufacturer of these products.
All parts shipped to the factory shall be shipped prepaid and will be returned F.O.B. Factory. Leon's Mfg. Company Inc. does not assume responsibility for shipping, labor or travel expenses.
Although Leon's products are designed to minimize tractor strain, Leon's Mfg. Company Inc. will assume no responsibility for damage to tractors or other equipment.
Leon's Mfg. Company Inc. reserves the right to make improvements and reserve the right to change the design, materials and specifications without notice or obligation.

MODEL NO. ___________________ DATE OF PURCHASE ___________________

SERIAL NO. ___________________ DEALER ___________________

TOWN ___________________ PROV. / STATE ___________________

OWNER ___________________ ADDRESS ___________________

TOWN ___________________ PROV. / STATE ___________________

What make and model of tractor will this product be used with? ___________________

Will this product be used: commercially? ________
privately? ________

Why did you buy Leon? Advertising ________
Previous Owner ________
Recommendation ________
Special Features ________

Comments:

NOTE: This warranty is effective only if the warranty registration is filled in and mailed by the original purchaser within ten days after the date of delivery.
SAFETY ALERT SYMBOL

ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The symbol above calls your attention to instructions concerning your personal safety. It is found throughout the manual as well as on the machine to point out specific hazards and ways to avoid them. Always follow the instructions to minimize the risk of personal injury or death.

OPERATING

- In addition to equipment configuration and design, hazard control and accident prevention depend on awareness, concern, prudence and proper training of personnel in the operation, maintenance, transport and storage of equipment.

- Always shut off tractor engine, disengage PTO, shift to “PARK” position or shift to neutral, set brakes and allow spreader to completely stop before dismounting tractor or working around the machine.

- Remove tractor start key when tractor and spreader will be unattended for adjustments or maintenance.

- Do not attempt to lubricate or adjust spreader while machine is in operation.

- Machinery operation should be performed only by persons who are trained and qualified to do so and are knowledgeable of the spreader.

- Only the operator should be permitted on the tractor (unless the tractor has a factory installed passenger seat) when the tractor and spreader are moving. Never permit anyone to ride in or on the spreader at any time.

- Avoid wearing loose-fitting clothing or jewelry when working around the spreader and tie up long hair that can entangle in moving parts.

- Wear personal protective equipment (PPE) such as, but not limited to, protection for eyes, lungs, ears, head, hands and feet when operating, servicing or repairing equipment.

- Be sure bystanders are clear before engaging and operating the tractor or spreader.

- Do not leave tractor or spreader unattended with tractor engine running.

- Never attempt to operate the spreader unless sitting in the tractor driver’s seat.

- Keep all guards and shields in place when spreader is in operation.

- Do not stand between tractor and spreader to install hitch pin when tractor is running.

- Regulate ground speed to field conditions, and maintain control at all times.

- Be sure tractor has sufficient weight to operate spreader on public roads, on hillsides and under any other adverse conditions.

- Do not load spreader when unhitched from the tractor.

- Do not dis-connect the spreader from the tractor with the spreader partially or fully loaded with material.

- Do not allow children to ride on, play on, or operate equipment. Always keep children away from equipment operating, servicing and storage areas.

- Be sure tractor is in safe operating condition and has adequate braking capabilities.

- Tractor should be equipped with rollover protective structure (ROPS), enclosed cab and seat belts. Use seat belts during operation.

- Detach and store spreader where children do not normally play. Always block the wheels and ensure that the hitch jack is stable and secured to spreader properly.
The spreader may have been partially disassembled for shipping. If assembly is required, contact Leon’s Mfg. Company Inc. for assembly instructions.

1) Install the tandem axle assembly into the main frame. The long side of the tandem axle goes toward the front of the unit. Secure the axle with the axle retainer and lock into place with first the ¾” hex nut and then lock the hex nut with the ¾” hex jam nut.

2) Install the wheel/tire assemblies on to the axles and secure with wheel bolts or wheel nuts. Refer to page 18 for wheel torque requirements.

3) Check and adjust the tire inflation pressure as per requirements on page 18.

4) Fill cavity between tandem axle bushings with a premium quality multi-purpose grease.

5) Lubricate all bearings with premium quality multi-purpose grease where applicable.

6) Ensure that all safety decals are in place. Decals and placement can be found on page 6 of this manual.

7) Ensure that the safety SMV emblem and safety warning lights have been installed properly.

8) Ensure that the safety chain is properly secured to the spreader hitch, if so equipped with a chain.

9) Connect warning safety lights and ensure that they work properly for all operation functions.

10) Ensure that all safety shields are in place and properly secured.

11) Ensure that all bolts and fasteners are in place and properly tightened.

12) Check beater drive roller chains and chain tighteners to ensure proper installation and tension.

13) Determine whether the tractor has open center or closed center hydraulics. The spreader with the special flow-control / sequence valve is only designed for Closed Center Hydraulics. Check hydraulic hoses and fittings for any loose connections. Add oil to the hydraulic system as required. Hook up the hydraulic hoses and cycle the end gate and push gate several times in order to purge air from the system. Add oil to the tractor until the oil in the tractor is within the normal operating range with all cylinders retracted. See page 18 for approximate oil volumes required to charge hydraulics.

14) Ensure that the gearbox is filled to appropriate level with multi-purpose gear oil SAE 80 or 90.

15) Determine what PTO speed of the tractor used to drive the spreader and check that the correct sprocket arrangement is installed. Refer to page 8 for sprocket arrangement. Ensure that the PTO is properly attached to meet the tractor drawbar length. (See connection decal for details.)

16) Hook up the spreader and perform a test run. Ensure that the area around the spreader is clear. Start the machine and observe from a distance, ensuring that all parts are working correctly. Stay clear of rear of machine while it is in operation, and make adjustments only after shutting down tractor and ensuring that all parts have ceased moving. Cycle the hydraulic end gate and push gate to ensure that no interference occurs. Check clearance between beaters and end gate and push gate. Check clearance between push-off cylinder and stationary and telescopic shields.

17) Note that when installing bearings or shaft couplers; apply blue Loctite to the setscrews before tightening. Always tighten lock collars on eccentric locking collar type bearings in the direction that the shaft is turning.
SAFETY DECAL LOCATIONS

WARNING – Travel Safety
#1760440 (located on front spreader frame panel)

⚠️ WARNING ⚠️
TRAVEL SAFELY:
1) DO NOT EXCEED 10 MPH (16 KPH)
   WITH LOADED SPREADER
2) MAXIMUM TRAVEL SPEED 20 MPH (32 KPH)
3) USE SAFETY CHAIN AND SAFETY LIGHTS
4) OBSERVE ALL HIGHWAY TRAFFIC REGULATIONS

DANGER – Keep away
#1760437 (located on front and rear frame panels)

⚠️ DANGER ⚠️
KEEP AWAY
STAND CLEAR
OF PUSHGATE
ENDGATE AND
ROTATING BEATERS
CONTACT WITH THEM
WILL CAUSE SEVERE
INJURY OR DEATH

WARNING – Shield Missing
#1760470 (located inside of chain housings)

⚠️ WARNING ⚠️
MISSING SHIELD HAZARD
INSTALL AND SECURE
MISSING SHIELD
BEFORE OPERATING

CAUTION – Do not permit riders on the spreader
#1760441 (located on front spreader frame panel)

⚠️ CAUTION ⚠️
1) DO NOT PERMIT RIDERS ON THE SPREADER.
2) ENSURE THAT ALL SHIELDS ARE IN PLACE.
3) CLEAR THE AREA OF ANY BystANDERS.
4) STAY CLEAR OF ALL MOVING PARTS.
5) OPERATE THE UNIT AT RATED PTO RPM.
6) SHUT OFF TRACTOR, REMOVE KEY
   ENGAGE PARK BRAKE AND ENSURE THAT
   THE UNIT IS COMPLETELY STOPPED BEFORE
   ANY MAINTENANCE, ADJUSTMENTS OR
   SERVICE WORK IS DONE TO THE UNIT.

WARNING – Ensure proper P.T.O. connection  #1760444 (located on front spreader frame panel)

⚠️ WARNING ⚠️
ENSURE PROPER PTO CONNECTION

- 9 -
DANGER – Hitch Jack #1785050 (located on front spreader hitch and beater housing panel)

DANGER – Stand Clear #1784768 (located on beater housing panels)
SAFETY DECAL LOCATIONS

DANGER – Rotating Beaters #1784767 (located on beater housing panels)

CAUTION – 1000 RPM #1760438
(located on front spreader hitch)

CAUTION – 540 RPM #1760439
(located on front spreader hitch)

⚠️ CAUTION

1) 1000 PTO RPM ONLY.
2) ENGAGE AND DISENGAGE PTO AT LOW SPEED.
3) SHARPTurns CAN DAMAGE THE DRIVELINE.
4) ENSURE PROPER PTO AND HITCH CONNECTIONS.
5) REVIEW OWNERS MANUAL FOR PROPER SETUP.
   1760438

⚠️ CAUTION

1) 540 PTO RPM ONLY.
2) ENGAGE AND DISENGAGE PTO AT LOW SPEED.
3) SHARPTurns CAN DAMAGE THE DRIVELINE.
4) ENSURE PROPER PTO AND HITCH CONNECTIONS.
5) REVIEW OWNERS MANUAL FOR PROPER SETUP.
   1760439
ATTENTION – Flow Control Valve Settings #1785055 (located on front spreader hitch)

PROPER FLOW CONTROL/SEQUENCE VALVE SETTINGS

VALVE FLOW RATE SETTINGS - ‘FC’
- To adjust the rearward travel speed of the pushgate.
- Turn the setscrew inward to decrease the pushgate speed or turn the setscrew outward to increase the pushgate speed.

VALVE SEQUENCE SETTINGS - OPENING - ‘SV1’
- To adjust the opening sequence of the endgate/pushgate.
- Turn the setscrew inward to increase the relief pressure, or to have the endgate raise fully prior to having the pushgate commence moving rearward.
- To set the valve, turn the setscrew SV1 inward until it bottoms in the valve. Activate the hydraulics so that the endgate fully opens. With the hydraulics still activated slowly turn the setscrew outward until the pushgate begins to move rearward. Adjust accordingly to fine tune the sequence and tighten the jam nut.

VALVE SEQUENCE SETTINGS - CLOSING - ‘SV2’
- To adjust the closing sequence of the endgate/pushgate.
- Turn the setscrew inward to increase the relief pressure, or to have the pushgate move forward prior to having the endgate commence closing.
- To set the valve, turn the setscrew SV2 inward until it bottoms in the valve. Activate the hydraulics so that the pushgate fully moves forward. With the hydraulics still activated slowly turn the setscrew outward until the endgate begins to close. Adjust accordingly to fine tune the sequence and tighten the jam nut.

SEE OPERATORS MANUAL FOR COMPLETE SETTING INSTRUCTIONS.

ATTENTION – Beater Synchronization #1785045 (located on beater housing panel)
SAFETY DECAL LOCATIONS

IMPORTANT – Proper Setup #1760643
(located on front spreader hitch)

IMPORTANT – Lubricate Daily #1784766
(located on beater housing panel)

IMPORTANT

1) ALWAYS ENSURE THAT TRACTOR DRAWBAR AND PTO ARE POSITIONED CORRECTLY AS PER PTO ‘WARNING’ DECAL.
2) ALWAYS REDUCE ENGINE SPEED TO IDLE PRIOR TO ENGAGING OR DISENGAGING PTO SYSTEM.
3) FOR OPTIMUM HYDRAULIC PUSHGATE OPERATION REDUCE OILFLOW AT TRACTOR TO 5 GPM.
4) ALWAYS ENSURE THAT ENDGATE IS FULLY RAISED PRIOR TO ENGAGING PUSH GATE HYDRAULICS.
5) ALWAYS ENSURE THAT DRAWBAR HITCH JACK IS SECURELY LOCKED AND STABLE PRIOR TO UNHOOKING IMPLEMENT.

1780643

IMPORTANT

1) LUBRICATE DRIVE CHAINS DAILY WITH A GOOD GRADE OF LUBRICATING OIL
2) ALWAYS REDUCE ENGINE SPEED TO IDLE PRIOR TO ENGAGING OR DISENGAGING PTO SYSTEM.

1784766
Attaching the Spreader

1) Ensure that your Leon's Silver Spreader Pre-Delivery Inspection has been completed prior to hook up.

2) Ensure that your tractor has sufficient power and weight and adequate braking capability to safely and properly control the spreader in field and road conditions, when the spreader is fully loaded.

3) Ensure tractor drawbar is properly adjusted for optimum PTO connection requirements.

4) Ensure that spreader is operating at the proper PTO speed. (540 RPM OR 1000 RPM). Check the tooth ratio on the drive sprockets as per the diagram below on page 12.

5) Secure PTO shields using the safety chains supplied with the PTO.

6) Use a properly sized hitch pin to attach the spreader.

7) Connect the drawbar safety chain to the spreader hitch and tractor drawbar.

8) Ensure that hitch jack is secured properly in storage location on spreader hitch and/or on the beater housing. On Vertical beater units ensure that the hitch jack on the rear beater housing is properly set in storage position when the unit is connected to the tractor.

9) Connect the hydraulic hoses as per the instructions in the pre-delivery inspection, page 15 to page 17 of this manual. Ensure that the tractor has on 'Open Center' Hydraulic system.

10) Connect the safety warning lights and ensure that they are working properly for all operating functions.

11) Ensure that the area around the spreader is clear prior to operation.

12) ENGAGE and DIS-ENGAGE the tractor PTO with the tractor at idle speed.
OPERATION AND MAINTENANCE

Proper Setup for Drive Sprockets and Chains – HORIZONTAL Beater Units

-See Layout on page 13.

TRACTOR PTO Drive: 540 PTO

A – MAIN BEATER DRIVE CHAIN
- 1760486 - SS425 / SS425RS Main Beater Drive Chain - #60 double x 90 Links w/connector
- 1764286 - SS575 / SS655 / SS755 Main Beater Drive Chain - #60 double x 94 Links w/connector

B – UPPER BEATER DRIVE CHAIN
- 1784294 - SS425 Upper Beater Drive Chain - #60H single x 94 Links w/connector
- 1785165 - SS425RS Upper Beater Drive Chain - #80 single x 70 Links w/connector
- 1784297 - SS575 / SS655 / SS755 Upper Beater Drive Chain - #60H single x 116 Links w/connector

C – MAIN DRIVE SPROCKET
- 1760393 - Main Drive Sprocket #60 – 20 TH (2)

D – MAIN BEATER SPROCKET
- 1760390 - SS425 Main Beater Sprocket #60 – 28 TH (3)
- 1785166 - SS425RS Main Beater Sprocket #60 – 28 TH (2) - #80 – 20 TH (1)
- 1784446 - SS575 / SS655 / SS755 Main Beater Sprocket #60 – 28 TH (2) - #60 – 24 TH (1)

E – UPPER BEATER SPROCKET
- 1760386 - SS425 Upper Beater Sprocket # 60 – 28 TH
- 1785170 - SS425RS Upper Beater Sprocket #80 – 20 TH
- 1784450 - SS575 / SS655 / SS755 Upper beater sprocket #60 – 36 TH

TRACTOR PTO Drive: 1000 PTO

A – MAIN BEATER DRIVE CHAIN
- 1760487 - SS425 / SS425RS Main Beater Drive Chain - #60 double x 92 Links w/connector
- 1784287 - SS575 / SS655 / SS755 Main Beater Drive Chain - #60 double x 96 Links w/connector

B – UPPER BEATER DRIVE CHAIN
- 1784294 - SS425 Upper Beater Drive Chain - #60H single x 94 Links w/connector
- 1785165 - SS425RS Upper Beater Drive Chain - #80 single x 70 Links w/connector
- 1784297 - SS575 / SS655 / SS755 Upper Beater Drive Chain - #60H single x 116 Links w/connector

C – MAIN DRIVE SPROCKET
- 1760392 - Main Drive Sprocket #60 – 14 TH (2)

D – MAIN BEATER SPROCKET
- 1760391 - SS425 Main Beater Sprocket #60 – 36 TH (2) - #60 – 28 TH (1)
- 1785167 - SS425RS Main Beater Sprocket #60 – 36 TH (2) - #80 – 20 TH (1)
- 1784447 - SS575 / SS655 / SS755 Main Beater Sprocket #60 – 36 TH (2) - #60 – 24 TH (1)

E – UPPER BEATER SPROCKET
- 1760386 - S425 Upper Beater Sprocket # 60 - 28 TH
- 1785170 - SS425RS Upper Beater Sprocket #80 – 20 TH
- 1784450 - SS575 / SS655 / SS755 Upper beater sprocket #60 – 36 TH
Proper Setup for Drive Sprockets and Chains – HORIZONTAL Beater Units

HORIZONTAL BEATER Drive Sprockets and Chains Layout

E - UPPER BEATER SPROCKET
B - UPPER BEATER DRIVE CHAIN
D - MAIN BEATER SPROCKET
A - MAIN BEATER DRIVE CHAIN
C - MAIN DRIVE SPROCKET
Proper Setup for Drive Sprockets and Chains – VERTICAL Beater Units

TRACTOR PTO Drive: 1000 PTO

A - MAIN DRIVE CHAIN
   - 1784782 - SS425 / SS425RS Main Drive Chain - #80 double x 224 Links w/connector
   - 1784671 - SS575 Main Drive Chain - #80 double x 260 Links w/connector
   - 1784957 - SS655 / SS755 Main Drive Chain - #80 double x 264 Links w/connector

B - MAIN DRIVE SPROCKET
   - 1784931 - Main Drive Sprocket #80 – 16 TH (2)

C - GEARBOX INPUT SPROCKET
   - 1784949 - SS425 / SS425RS / SS575 GearBox Input Sprocket #80 – 24 TH (2)
   - 1784958 - SS655 / SS755 Gearbox Input Sprocket #80 – 28 TH (2)

D - GEARBOX OUTPUT SPROCKET
   - 1784947 - SS425 / SS425RS / SS575 / SS655 / SS755 Gearbox Output #80 – 20 TH (2)

VERTICAL BEATER Drive Sprockets and Chains Layout
OPERATION AND MAINTENANCE

PROPER SETUP FOR HYDRAULIC SYSTEMS – PARKER Flow Control / Sequence Valve Setup

Hydraulic lines hook up as follows: (Refer to page P62 to P65 for detailed figures and parts details.)

Consult your dealer to determine whether you have an Open or Closed Center Tractor Hydraulic System.

THIS SYSTEM IS FOR CLOSED CENTER TRACTOR HYDRAULIC SYSTEMS ONLY.
OPERATION AND MAINTENANCE

PROPER SETUP FOR HYDRAULIC SYSTEMS – BRAND Flow Control Valve Only Setup

Hydraulic lines hook up as follows: (Refer to page P62 to P65 for detailed figures and parts details.)

Consult your dealer to determine whether you have an Open or Closed Center Tractor Hydraulic System.

OPEN CENTER HYDRAULICS
(w/o Hose Tray)

CLOSED CENTER HYDRAULICS
(w/o Hose Tray)
PROPER SETUP FOR HYdraulIC SYSTEMS – BRAND Flow Control Valve Setup

Hydraulic lines hook up as follows: (Refer to page P62 to P65 for larger figures and parts details.)

Consult your dealer to determine whether you have an Open or Closed Center Tractor Hydraulic System.

A kit is available that connects the push-gate hydraulic system and end-gate hydraulic system together into one system. The first sequence valve is set to ensure that the end-gate is fully open prior to the push-gate engaging and ejecting the load. The second sequence valve is set to ensure that the push-gate is clear of the end-gate prior to the end-gate engaging and closing.

Note: Sequence Valve kit is shown for Closed Center Hydraulic Systems setup.
OPERATION AND MAINTENANCE

BEFORE OPERATING SPREADER

BEFORE LOADING

- Lubricate spreader bearings, PTO shaft and walking axles.
- Check and adjust tire pressure.
- Check wheel bolt torque as listed below.
- Hitch spreader to tractor and cycle operate the entire spreader while empty. Stop tractor and make adjustments as required.
- Cycle all hydraulic functions several times to ensure proper operation of hydraulics. Ensure to raise the end gate fully before cycling the push gate. This is highly recommended during freezing conditions to ensure that the push off gate moves freely prior to loading with manure. When all the cylinders are retracted, check the tractor oil level, adding to maintain normal levels.
- Approximate oil volumes required to charge the hydraulic system:
  Model SS-425   21 liters
  Model SS-575   24 liters
  Model SS-655   26 liters
  Model SS-755   26 liters

WHEEL BOLT TORQUE

IMPORTANT! New Spreaders: Tighten all wheel bolts after spreading the first few loads. Tighten hub bolts to:

| Model SS-425 | 5/8 bolts | 180 ft-lbs |
| Model SS-575 | 5/8 bolts | 180 ft-lbs |
| Model SS-655 | 5/8 bolts | 180 ft-lbs |
| Model SS-755 | 5/8 bolts | 180 ft-lbs |

TRANSPORT SAFETY CHAIN / SAFETY LIGHTS
Always use a transport safety chain and Safety Lights in use on roads as per Highway Traffic Regulations.

TIRE PRESSURE

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>425/65 R22.5</td>
<td>60</td>
</tr>
</tbody>
</table>

TRACTOR 3PT HITCH LIFT ARMS
Maintain lowest position to avoid spreader hitch damage when turning.

HITCH JACK - DANGER!

TO PREVENT INJURY AND JACK FAILURE, DO NOT USE JACK WITH LOADED OR PARTIALLY LOADED SPREADER. ALWAYS POSITION HITCH JACK(S) IN SUPPORT POSITION PRIOR TO UNHITCHING SPREADER FROM TRACTOR.

- Do not load spreader when unhitched from tractor.
- Do not use jack to support partially or fully loaded spreader.
- Do Not Unhitch spreader from tractor if spreader is fully or partially loaded.
- Stand clear of hitch when raising or lowering hitch jack.
- Securely block wheels before unhitching on uneven terrain.
- Store hitch jack on spreader frame after hitching to tractor and before towing spreader.
- Note that Vertical Beater spreaders utilize a Front and Rear hitch jack.
- Ensure that Rear hitch jack is positioned in support position prior to unhitch spreader from tractor.
LOADING RECOMMENDATIONS AND PRECAUTIONS

- Start loading spreader at front end and continue loading towards the rear of the spreader.
- Load in the center of the spreader (lengthwise) and do not overload to one side or the other.
- Do not overload spreader, to ensure proper unloading and spreading of the manure. Over-heaping of the spreader leads to poorer distribution patterns and over-loading of the spreader drive system.
- If dirt or sand or heavy clay is mixed with manure, reduce the volume accordingly.
- Watch for and remove any large foreign objects from manure during the loading procedure to prevent machine damage or personnel injury from flying debris during the spreading operation.
- Break up large masses of long straw or frozen chunks of manure prior to loading for even spreading.
- It is recommended that heavier types of manure be loaded at the rear of the spreader and lighter manure be loaded at the front of the spreader in one load to ensure proper push off and spreading of the manure.

Do Not Overload the Spreader
Maximum gross weight as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight (lbs)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-425</td>
<td>25, 250</td>
<td>11, 450</td>
</tr>
<tr>
<td>SS-575</td>
<td>34, 250</td>
<td>15, 535</td>
</tr>
<tr>
<td>SS-655</td>
<td>37, 250</td>
<td>16, 900</td>
</tr>
<tr>
<td>SS-755</td>
<td>39, 250</td>
<td>17, 805</td>
</tr>
</tbody>
</table>

Maximum volumes as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-425</td>
<td>Approximately - 425 heaped bushels</td>
</tr>
<tr>
<td>SS-575</td>
<td>Approximately - 575 heaped bushels</td>
</tr>
<tr>
<td>SS-655</td>
<td>Approximately - 655 heaped bushels</td>
</tr>
<tr>
<td>SS-755</td>
<td>Approximately - 755 heaped bushels</td>
</tr>
</tbody>
</table>

UNLOADING RECOMMENDATIONS AND PRECAUTIONS

ALWAYS ENGAGE THE PTO WITH THE TRACTOR AT IDLE RPM SPEED. SLOWLY INCREASE THE TRACTOR RPM SPEED TO OPERATING SPEED AND ALWAYS OPERATE THE SPREADER AT RECOMMENDED RPM. ALWAYS START THE BEATERS BEFORE COMMENCING TO UNLOAD THE SPREADER.

Engage PTO at low speed and increase gradually to operating speed. When the manure is completely unloaded slowly reduce the PTO speed and disengage PTO. It is highly recommended to engage and disengage the PTO slowly especially with tractors that are equipped with PTO brakes. Sudden, abrupt starts or stoppages of the PTO system may generate high torque loads on the tractor and spreader drive systems.

Activate the tractor hydraulics to commence the push off function. Note that with the current hydraulic setup which includes a Flow Control / Sequence Valve, only one hydraulic system is required to activate the push gate and endgate. This valve is located at the front of the spreader frame. This valve and the spreader hydraulic system is designed to operate with about 4 gpm maximum oil flow. Therefore to optimize the spreader performance with this valve system the tractor hydraulic valve should be adjusted to decrease the oil flow to about 4 to 5 gpm. When the hydraulic system is activated Ensure that the Endgate fully opens prior to the Pushgate commencing movement rearward. If the endgate does not fully open, adjust the Flow Control / Sequence Valve accordingly as described on next page. The operator may wish to be stationary with the tractor and spreader until the push off cylinder has compressed the manure to the extent that the entire load has started to move rearward and start to fully contact the beaters. This ensures an even spread pattern for the entire unloading operation from beginning to the end. Note that the beaters, (horizontal and vertical) can be revolving at full rpm and the endgate opened without interference between the beaters and endgate. It also beneficial to begin the spreading operation in this sequence to prevent piles of manure in the field if the endgate is opened prior to having the beaters revolving at proper speed.

Ensure that the manure passes under the opened endgate freely and the manure does not bind between the raised endgate and push off gate. Overloading of the spreader may result in binding of material at this pinch point and bending of the endgate or pushgate and pushgate hydraulic cylinders.
UNLOADING RECOMMENDATIONS AND PRECAUTIONS

If the end gate does not fully open prior to the push gate commences to move rearward then the sequence valve must be adjusted. On the Flow Control Valve remove the protective cap on Setscrew ‘SV1’. Loosen the jam nut and then turn the setscrew with an Allen wrench. Turn the setscrew inward to increase the relief pressure, or to have the endgate fully open prior to having the pushgate commence moving rearward. Adjust the sequence valve accordingly and then tighten the jam nut and replace the protective cap.

If the pushgate does not commence moving rearward after the endgate had fully opened the sequence valve must be adjusted. On the Flow Control Valve remove the protective cap on Setscrew ‘SV1’. Loosen the jam nut and then turn the setscrew with an Allen wrench. Turn the setscrew outward to decrease the relief pressure, or to have the endgate fully raise and then to have the pushgate commence moving rearward. Adjust the sequence valve accordingly and then tighten the jam nut and replace the protective cap.

To initially set the valve for the opening sequence, turn the Setscrew ‘SV1’ inward until it bottoms in the valve. Activate the hydraulics so that the endgate fully opens. With the hydraulics still activated slowly turn the same setscrew outward until the pushgate begins to move rearward. Adjust accordingly to fine tune the opening sequence. The endgate should always open completely before the pushgate begins to move rearward to prevent damage to the endgate, pushgate and hydraulic systems.

The pushgate travel speed can be adjusted by adjusting the tractor hydraulic flow or by adjusting the Flow Control Valve on the spreader. It is recommended that the tractor hydraulic flow be reduced to about 4 to 5 gpm to optimize the push off sequence. The final adjustment in spread pattern and density can be further controlled with the forward tractor speed as required. To increase the travel speed of the pushgate and therefore increase the spread density (also reducing the unloading time) adjust the setscrew ‘FC’ on the Flow Control Valve. On the Flow Control valve remove the protective cap on Setscrew ‘FC’. Loosen the jam nut and then turn the setscrew with an Allen wrench. Turn the setscrew inward to decrease the pushgate travel speed or turn the setscrew outward to increase the pushgate travel speed. Adjust the sequence valve accordingly as required and then tighten the jam nut and replace the protective cap.

Note that to high of a pushgate travel speed can result in a heavy spread density manure. It can also result in over-loading of the spreader drive system and possible damage to the pushgate, beaters and drive chains and sprockets.

When the manure is completely unloaded slowly reduce the PTO speed and disengage PTO. It is highly recommended to disengage the PTO slowly especially with tractors that are equipped with PTO brakes. Sudden, abrupt stoppage of the PTO system may generate high torque loads on the tractor and spreader drive systems.

Return push gate to front of spreader. Ensure that the endgate does not begin to close prior to the pushgate commencing to move forward. Also ensure that any fallen manure over the push off gate passes clearly out the front of the spreader. Overloading of the spreader may result in binding of material at this pinch point. Lower the end gate completely, ensuring that no material remains in the spreader and binds between the end gate and main push off rails.

If the endgate begins to close prior to the push gate moving full forward to the front of the machine adjust the Flow Control / Sequence Valve accordingly. On the Flow Control Valve remove the protective cap on Setscrew ‘SV2’. Loosen the jam nut and then turn the setscrew with an Allen wrench. Turn the setscrew inward to increase the relief pressure, or to have the pushgate move fully forward prior to having the endgate commence closing. Adjust the sequence valve accordingly and then tighten the jam nut and replace the protective cap.

If the endgate does not close after the push gate has fully moved ahead to front of the machine the sequence valve must be adjusted. On the Flow Control Valve remove the protective cap on Setscrew ‘SV2’. Loosen the jam nut and then turn the setscrew with an Allen wrench. Turn the setscrew outward to decrease the relief pressure, or to have the pushgate move full forward and then to have the endgate commence closing. Adjust the sequence valve accordingly and then tighten the jam nut and replace the protective cap.
UNLOADING RECOMMENDATIONS AND PRECAUTIONS

To initially set the valve for the closing sequence, turn the Setscrew ‘SV2’ inward until it bottoms in the valve. Activate the hydraulics so that the pushgate moves fully forward. With the hydraulics still activated slowly turn the same setscrew outward until the endgate begins to close. Adjust accordingly to fine tune the closing sequence. The pushgate should always fully move forward before the endgate begins to close to prevent damage to the endgate, pushgate and hydraulic systems.

If the spreader is equipped with Vertical beaters the spread pattern width can be adjusted with the two adjustable deflector doors on each side of the beater housing. To limit the spread width to a narrower pattern if so required position the doors inward so they are parallel to walls of the beater housing. To increase the spread width to a wider pattern if so required position the doors outward so they are perpendicular to the walls of the beater housing.

If the spreader is equipped with a slurry pan, the spreader can be operated with the slurry pan raised in the closed position or lowered in the open position, as per the operator’s preference. To lower the slurry pan once in the field, pull the cable at the front of the unit. It is recommended to always start the beaters prior to lowering the slurry pan to ensure an even spread of manure, and prevent piles on the ground. To raise the slurry pan into the closed position, swing the slurry pan forward and upward until the spring loaded pin engages below the pan. If the spreader is equipped with vertical beaters, the slurry pan can be raised into the closed position with the aid of a slurry pan handle stored on the side of the beater housing. Slip the pipe of the handle into the tubing on the slurry pan and push on the handle to swing the slurry pan into the raised closed position. Note that the pin may only engage on the slurry pan seal if it is not swung up fully. If so, the slurry pan may disengage by itself when being towed on a road or field, or when loaded with manure.

SPREADING RECOMMENDATIONS

-The Leon Silverspreaders are designed to operate at either 540 or 1000 tractor RPM. Proper operating speed results in optimum performance of the unit and the best spread density, texture and width. Lower operating speeds reduce the beater to manure contact speed and results in poorer spreading performance.

-The Leon Silverspreaders are designed for a specific capacity of manure in the spreader box. Over heaping of the spreader will result in the heaped load to simply push over top of the top beater and result in poor spread pattern and piles in the field. Excessive over heaping of the spreader will also incur higher loads on the drive systems and could result in damage to the beaters, drive sprockets, chains and hydraulic system.

-The Leon Silverspreaders are designed to have a slurry pan at the rear of the spreader below the beaters. The slurry pans are not just to retain the semi-liquid types of manure within the spreader. The slurry pan also ensures that minimum amounts of manure pass under the bottom beater but it is picked up and thrown upward by the beater.

-The Leon VERTICAL Silverspreaders are specifically designed to have the left and right beater synchronized for optimum spreader performance and maximum spread pattern width. The beaters should be timed with the beater blades offset from each other. See page 9 of the manual for proper settings. By properly synchronizing the beaters allows for maximum amounts of manure to be spread and for optimum spread texture and density.

-The Leon Silverspreaders are designed for optimum spread density with uniformly loaded manure. When loading the spreader with manure the load should be packed to eliminate air spaces and loose materials. Packing the load contributes to finer more uniform spreading and more even spread patterns on the field.

-The Leon Silverspreaders are designed to handle all types of manure, but are not designed for foreign types of rocks, fence posts, wire, etc. Ensure that when loading the spreader, care is taken to prevent from loading such large type of foreign materials. This not only prevents damage from the spreader but also prevents damage from surrounding buildings, vehicles, livestock and humans if possibly struck by these flying pieces of foreign debris.

-Use all CARE when operating the Leon Silverspreaders, when loading and unloading the unit to prevent accidents from occurring because of the rotating beaters, moving parts and especially flying debris.
OPERATION AND MAINTENANCE

END OF DAY
Repair any damage that may have occurred. Thoroughly clean spreader, especially in freezing temperatures. Check for excessive material between the main rails and push off gate to ensure that the push off gate will be free to move. Also check for excessive material build up on the beater paddles, and remove as required. Excessive material may cause unbalanced operation of the beaters and cause ‘chain whip’ or spreader bounced when being operated. Check for material build up on the telescopic push off cylinder shield so that it is free to move back and forth and does not start binding material between the shields, especially in freezing conditions.

BEFORE STORAGE
Clean and lubricate machine. Park the spreader on the level surface and use hitch jack to elevate front of the machine slightly to ensure that water will flow out. Install blocks in front of tires.

MAINTENANCE

- Always follow proper safety precautions.
  Never attempt any service, maintenance, adjustment or repair unless you have been properly trained and are qualified to do so.
  Always shut off the tractor, engage the park brake and take steps to ensure no person can start up the machine while you are working on it.

- Roller Chains.
  Keep chains clean. Lubricate with a good quality chain lubricant every 8 hours of operation. Adjust chain tighteners as required to take up any slack in the chain. Do not over-tighten.

- PTO.
  Lubricate the U-joints, telescoping members and shield bearings every 8 hours of operation, using premium quality multi-purpose grease.

- Gearbox.
  Check oil level periodically. If necessary, add multi-purpose gear oil SAE 80 or SAE 90.

- Axles, Wheels & Tires.
  Check wheel bolts hourly for the first day of operation and every 50 hours of operation thereafter.
  Check tires daily for sign of damage or noticeably low air pressure. Every 50 hours check the tire pressure. Grease walking beam bearings every 8 hours and wheel bearings every 50 hours with premium quality multi-purpose grease.

- Beater Bearings and Drive-line Bearings
  Grease every 100 hours using premium quality multi-purpose grease, if bearings are so equipped.

LUBRICATION AND CHECK SUMMARY

8 hrs  Clean, adjust and lubricate all roller chains
       Grease PTO
       Grease walking beam bearings
       Check tires

50 hrs  Check wheel bolts
       Check air pressure
       Grease wheel bearings

100 hrs  Check gear box – multi purpose gear oil SAE 80 or SAE 90
          Grease beater and drive line bearings


**DETAILS AND SPECIFICATIONS SUMMARY**

**BOX DIMENSIONS**

Model SS-425  
68" W x 192" L x 37" D  
Volume: 272 level cubic feet  
Approximately 425 heaped bushels

Model SS-575  
68" W x 192" L x 54" D  
Volume: 408 level cubic feet  
Approximately 575 heaped bushels

Model SS-655  
80" W x 192" L x 47" D  
Volume: 431 level cubic feet  
Approximately 655 heaped bushels

Model SS-755  
80" W x 192" L x 54" D  
Volume: 481 level cubic feet  
Approximately 755 heaped bushels

**SPREADER DIMENSIONS**

Model SS-425  
Overall length: 321"  
Width: 120"  
Upper beater (H) height: 75"  
Beater Housing (V) height: 108"

Model SS-575  
Overall length: 321"  
Width: 120"  
Upper beater (H) height: 82"  
Beater Housing (V) height: 120"

Model SS-655  
Overall length: 321"  
Width: 133"  
Upper beater (H) height: 83"  
Beater Housing (V) height: 115"

Model SS-755  
Overall length: 321"  
Width: 133"  
Upper beater (H) height: 85"  
Beater Housing (V) height: 120"

**TIRES AND WHEEL —All Models:**

Tire: 16.5 x 22.5 farm casing  
Rim: 11.75 x 22.5 x 8-bolt  
TR-501 metal valve  
Hub: 8-bolt

**GEAR BOX —All Models:**

Gear Ratio: 1:1  
Input Shaft: 1 3/8" Dia. with 5/16" key.  
Output Shaft: 1 3/8" Dia. with 5/16" key.

**GEAR BOX —Vertical Beater Models:**

Gear Ratio: 1:1  
Input Shaft: 1 3/4" Dia. - 20 spline  
Output Shaft: 1 3/4" Dia. - 20 spline

**BEATERS —HORIZONTAL**

Main Beater: SS-425  
24" Diameter  
12 paddles  
SS-575  
26" Diameter  
12 paddles  
SS-655 / SS-755  
26" Diameter  
15 paddles  
Upper Beater: SS-425  
16" Diameter  
12 paddles  
SS-575  
26" Diameter  
12 paddles  
SS-655 / SS-755  
26" Diameter  
15 paddles

**BEATERS —VERTICAL**

Main Beaters: SS-425  
36" Diameter  
12 paddles  
SS-575  
326" Diameter  
16 paddles  
SS-575 / SS-655 / SS-755  
42" Diameter  
16 paddles
DETAILS AND SPECIFICATIONS SUMMARY

CYLINDERS

Push Cylinders: Model SS425
  Bore Diameter: -3.0" and 3.5"
  Shaft Diameter: -1.75" / 2.00"
  Stroke: -80" /cylinder
  Design Pressure: -3000 psi
  Test Pressure: -3500 psi

Push Cylinders: Model SS575
  Bore Diameter: -3.5" and 4.0"
  Shaft Diameter: -2.00" / 2.50"
  Stroke: -90" /cylinder
  Design Pressure: -3000 psi
  Test Pressure: -3500 psi

Push Cylinders: Model SS655
  Bore Diameter: -4.0" and 4.5"
  Shaft Diameter: -2.50" / 3.00"
  Stroke: -90" /cylinder
  Design Pressure: -3000 psi
  Test Pressure: -3500 psi

Push Cylinders: Model SS755
  Bore Diameter: -4.0" and 4.5"
  Shaft Diameter: -2.50" / 3.00"
  Stroke: -90" /cylinder
  Design Pressure: -3000 psi
  Test Pressure: -3500 psi

Rear Gate Cylinder: All Models
  Bore Diameter: -2.0"
  Shaft Diameter: -1.25"
  Stroke: -17"
  Design Pressure: -3000 psi
  Test Pressure: -3500 psi
BEATER HOUSING ASSEMBLY
REMOVAL / INSTALLATION INSTRUCTIONS

1) OPEN THE TWO CHAINCASE HOUSINGS ON THE RIGHT SIDE OF THE UNIT.
2) REMOVE THE MAIN LOWER DRIVE CHAIN, BY SPLITTING THE CHAIN.
3) LOOSEN AND COMPLETELY REMOVE THE THREE 1" DIA BOLTS ON THE RIGHT SIDE, AND THEN THE THREE 1" DIA BOLTS ON THE LEFT SIDE.
4) WITH THE AID OF A FRONT END LOADER TRACTOR, CONNECT TWO CHAINS TO THE BEATER ASSEMBLY. CONNECT ONE CHAIN TO THE RIGHT BEATER HOUSING IN THE CHAIN HOOK, AS NOTED WITH A DECAL. CONNECT ANOTHER CHAIN TO THE LEFT BEATER HOUSING IN THE CHAIN HOOK, AS NOTED WITH A DECAL. IT IS BEST TO HAVE THE CHAINS CONNECTED TO THE FRONT END LOADER AT THE SAME WIDTH AS THE CHAIN HOOKUP POINTS AS THE BEATER HOUSING.
5) SLOWLY RAISE THE LOADER BUCKET STRAIGHT UP. THE BEATER HOUSING ASSEMBLY WILL SWING REARWARD ABOUT AND THEN LIFT OFF OF THE PIVOT HOOK EYES.
6) RAISE THE BEATER ASSEMBLY UNTIL IT COMPLETELY CLOSES THE SPREADER FRAME, BACK AWAY FROM THE UNIT AND THEN LOWER THE ASSEMBLY ON THE GROUND. REST THE ASSEMBLY SO THAT IT SETS WITH BOTH BEATERS ON THE GROUND, TO ENSURE THAT IT DOES NOT FALL OVER AT A LATE DATE.
7) THE UNIT IS NOW READY TO USE WITHOUT THE BEATERS.
8) TO INSTALL THE BEATER ASSEMBLY, SIMPLY REPEAT THE PROCEDURE FROM STEP 1 TO 6.
9) WHEN LOWERING THE ASSEMBLY ON TO THE SPEADER FRAME, FIRST ALIGN THE HOOKS ON THE BEATER HOUSINGS WITH THE HOOK RETAINERS ON THE FRAME.
10) SLOWLY LOWER THE ASSEMBLY, ALLOWING IT TO PIVOT ON THESE HOOKS AND THEN ALLOWING THE CUP AND CONE PARTS FULLY MATE AS COMPLETELY LOWERED.
11) INSTALL THE SIX 1" BOLTS AND SECURELY TIGHTENED PRIOR TO USING THE BEATERS AGAIN.
12) PRIOR TO SPEADING ANY MANURE, TEST RUN THE BEATERS TO ENSURE THAT THE BEATERS AND CHAINS TURN FREELY AND ARE ALIGNED PROPERLY.
13) THE REMOVAL AND INSTALLATION PROCEDURE IS TYPICAL FOR ALL MODELS.

NOTE: PICTURES SHOW 425 H-BEATER UNIT.
ALL INSTRUCTIONS APPLY FOR HORIZONTAL AND VERTICAL BEATER UNITS.
ALL INSTRUCTIONS APPLY FOR ALL MODEL SIZES.
A) OPEN THE CHAIN CASES

B) REMOVE THE LOWER DRIVE CHAIN
C) REMOVE THE 1" DIA. BOLTS

D) HOOK TWO CHAINS TO THE BEATER HOUSINGS AND LIFT THE ASSEMBLY
E) COMPLETELY CLEAR THE SPEADER UNIT AND LOWER ASSEMBLY TO THE GROUND

F) THE UNIT IS NOW READY TO USE WITHOUT THE BEATER ASSEMBLY
G) WHEN INSTALLING THE BEATER ASSEMBLY ENSURE THAT THE HOUSING HOOKS ENGAGE THE HOOK RETAINERS ON THE MAIN FRAME
SAFETY LIGHT MOUNTING INSTRUCTIONS:
KIT #1784425

-Mounting Instructions apply to all modes of spreaders.
-Right side is determined when standing at rear of machine and facing the unit.

1) Mount Left Bracket (1784416) to left side of box with four of 3/8 x 1 ½ bolt (1102002), four of 3/8 flatwashers (1102609) and four of 3/8 locknut (1102536) as per figures 1 and 2.

2) Mount Right Bracket (1784415) to right side of box with two of 3/8 x 1 ½ bolt (1102002), two of 3/8 flatwashers (1102609) and two of 3/8 locknut (1102536) as per figures 3 and 4.

3) Mount one of Amber Light (1784410) in top notch of left bracket with nut and washers supplied with light as shown in figures 1 and 2.

4) Mount one of Amber Light (1784410) in notch of right bracket with nut and washers supplied with light as shown in figures 3 and 4.

5) Mount one of Red Light (1784111) in bottom notch of left bracket with nut and washers supplied with light, with lens towards rear of the unit as shown in figures 1 and 2.

6) Install wiring harness (1784420) from the front of the unit towards the rear. Route the harness along the oil-lines on the hitch, along the oil-lines on the side of the frame, along the oil-lines under the frame channel and along the hydraulic hoses underneath the frame as in figures 5, 6 and 7. Note, route the harness through the notch in the frame cross member as in figure 5, and route the harness through the notch in the frame post as in figure 6.

7) On the right hand side, route the harness section for the left lights downward along the chain case and then under the unit to the left side, following the hydraulic hoses. Connect the shorter section of the harness to the right amber light as shown in figures 3 and 8.

8) On the left hand side, route the harness upward along the chain case and then through the hole, rearwards to the lights as shown in figures 9 and 10. Connect the harness to the left amber light and red light as shown in figure 2.

9) At the front of the unit, along the hitch, remove the 3/8 locknut and 2-line clamp. Secure the existing clamp with a 3/8 hex nut. Then install the wiring harness and secure with another 2-line clamp and the 3/8 locknut. See figure 11.

10) Along the frame channel, loosen the 3/8 locknut for the offset line clamps, install the wiring harness and retighten the 3/8 locknut, as per figure 7.

11) On the left and right sides of the unit, snug the wiring harness underneath the unit and then secure the harness with a 2-line clamp (1707130), a 3/8 x 2 ½ bolt (1102004), one of 3/8 flatwasher (1102609) and one of 3/8 locknut (1102536). See figures 8 and 9.

12) On the left side of the unit, loop the harness and secure to the light bracket with one of 2-line clamp (1707130), one of 3/8 x 1 ½ bolt (1102002), one of 3/8 flatwashers (1102609) and one of 3/8 locknut (1102536) as per figure 2.

13) Secure the harness underneath the frame with the existing 2-line clamps securing the hydraulic hoses in the same manner as in figure 7.

14) Secure all loose sections of the harness with the tie-straops provided.

15) Secure the SMV emblem (1178885) to the left bracket, underneath the lights, with two of 5/16 x 1 bolts (1101950), four of 5/16 flatwashers (1102608) and two of 5/16 locknuts (1102521).

- PAGE 35 -
SAFETY LIGHT MOUNTING INSTRUCTIONS:
KIT #1784425

FIGURE 1

FIGURE 2

- PAGE 36 -