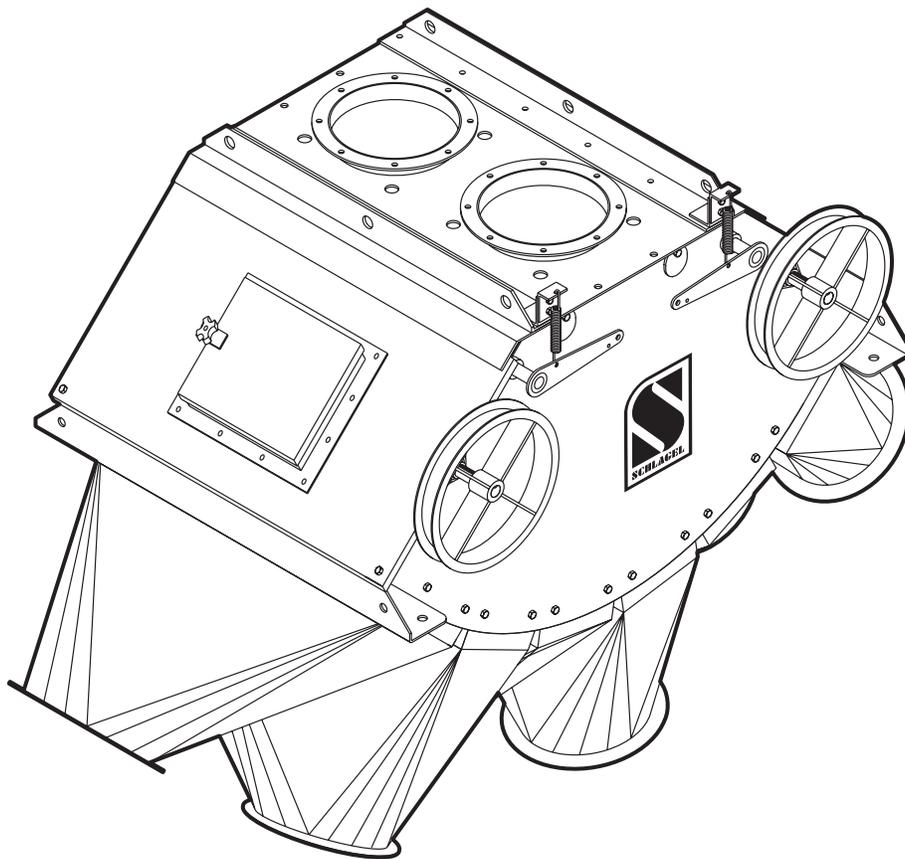


SWINGSET® DISTRIBUTOR

Installation and Operation Manual



SCHLAGEL

Manufacturers of Innovative Material Handling Equipment since 1957.

491 North Emerson Street * Cambridge MN 55008-1316 U.S.A.
Toll Free (800) 328-8002 FAX (763) 689-5310
Local / International (763) 689-5991 EMAIL sales@schlagel.com
www.schlagel.com

TABLE OF CONTENTS

SECTION 1 - GENERAL

Pages	1	Introduction
	1	Use of Manual
	2	Information Service
	2	Uncrating and Inspection
	2	Distributor Hardware Packing List
	2	Safety Code

SECTION 2 - ASSEMBLY AND INSTALLATION

Pages	3-4	Installation
	5	Parts List and Drawing
	6	Spout Detail
	7	Typical Cable Run Layout

SECTION 3 - OPERATION AND MAINTENANCE

Pages	8	Operation
	8	Maintenance
	8	Trouble Shooting
	9	Spout Removal
	9	Ordering Information
	10	Notes

INTRODUCTION

This distributor has been designed to give you many years of faithful service. To obtain all of the benefits built in to it, the following instructions should be read and adhered to as closely as possible during installation. These instructions are suggestions to help the installer determine the best way to mount the unit.

USE OF MANUAL

This manual provides installation, operation, service recommendations and replacement parts identification for Schlagel SwingSet® Distributors.

Each section of the manual is fully illustrated for fast, accurate reference. It is highly recommended that this manual be read thoroughly by those who are responsible for the installation, operation and maintenance of this distributor. Refer to the Table of Contents, on this page for the location of specific information.

As new information and equipment become available, service and parts bulletins will be issued by Schlagel, Inc. So that they will be readily available for reference, all bulletins should be inserted with this manual. This manual covers standard distributor equipment only. For any items or special equipment not covered in this manual, please consult our service department for recommendations or instructions regarding this equipment.

INFORMATION SERVICE

Enclosed with your distributor shipment is our packing list that details all items on your order. This packing list should be saved for future reference. The invoice number shown on this document is the same as the serial number shown on your distributors I.D. tag. If you ever need to call the factory for parts or service it is very helpful to have this serial number available. Please record the information below now and save this booklet for future reference.

Date of Purchase: _____

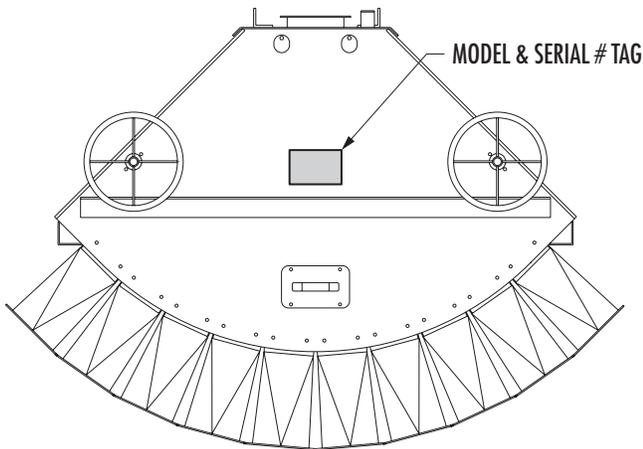
Purchased from: _____

Installed by: _____ Date: _____

Serial Number: _____

Model: _____

Email or Call: Schlagel, Inc.
 491 North Emerson Street
 Cambridge, MN 55008
 (763) 689-5991 or 1-800-328-8002
 sales@schlagel.com



UNCRATING AND INSPECTION

Your distributor has been carefully checked and operated before shipment from our factory. In the event that any parts are missing or damaged, please notify us immediately and also have the delivering carrier note this is on the Bill of Lading.

IMPORTANT

All claims for shipping damages must be noted by the consignee at the time of delivery and filed with the transportation company.

DISTRIBUTOR HARDWARE PACKING LIST

QTY.		QTY.	
CONTROL WHEEL HOUSING	1	HOT HOUSE PULLEYS	3
3/16" AC CONTROL CABLE	1	SIDE PULLEYS	3
LIFT PEDAL	1	NUMBER CARD	1
3/16" CABLE CLAMPS	6		

NOTE: THE ABOVE QUANTITIES ARE FOR EACH SPOUT IN THE DISTRIBUTOR.

SAFETY CODE

⚠ WARNING ⚠

The icon shown below was proposed as a safety alert symbol by the Farm and Industrial Equipment Institute (FIEI) and approved by the American Society of Automotive Engineers (ASAE) and others for the purpose of calling attention to safety precautions which if not heeded might lead to bodily injury.

Please read instructions carefully and follow the instructions exactly wherever this symbol appears in the manual.

LOOK FOR THESE SAFETY LABELS



INSTALLATION

1. When making a decision how to mount the distributor, keep in mind it is very important to provide access to the distributor inspection doors and the control wheels for future maintenance requirements. We strongly recommend a service platform for access to these areas. (See page 5 for access panel locations). There is a large formed angle with holes at each end corner of the unit that we recommend using to support the distributor. The best method is to run threaded rods down to these holes from your overhead structural platform. These rods are then used to level the distributor. Other methods of support are acceptable as long as they do not induce excessive stress to the body of the distributor.

NOTE: The top plate of the distributor with the round inlet collar is not designed to support the distributor. If you connect the inlet transition(s) to the legs or conveyor before connecting the outbound spouting be very careful not to put excessive stress on the distributor body. Deflecting the top plate or twisting the body will cause the spouts to bind and lead to problems in operation.

2. Spout the outbound ducts, preferably using reversible elbows to obtain the desired angle on the spout. Connect the opposite duct of the distributor from the one previously spouted to limit stresses put on the base of the unit.
3. Connect the inlet from the conveyor or leg, but do not apply extreme pressure to the inlet collar.

NOTE - *The inlet should be connected only after the spouting has been run to prevent bowing or twisting of the inlet plate. If this happens the spout may not swing or seat correctly.*

We realize that in actual field assembly the first step is frequently connecting the inlet of the distributor to the leg and that this is generally the easiest way to establish the mounting location. If using this method be very careful when spouting the unit to not distort the body or the inlet collar. We receive many more complaints about inner spouts binding in the distributor when installed in this fashion.

4. After the spouts have been connected and before the control cable has been run, operate the distributor by hand to see if it works satisfactorily. If difficulties are encountered, remedy them at this time so that if it works hard from the remote operator, after it has been connected, the trouble will be found in the run of the cable
5. Position the hand control wheel bracket at a level comfortable for the operator and on a surface that will allow routing of the cable between the hand control and the cable wheel(s) on the distributor. The pointer opening in the front of the housing is the UP side of the control.
6. Remove the outer half of the control housing and bolt the back channel making certain that the outer half is slid all the way up by means of the slotted holes. (See page 7). This will allow you to pull downward later when tensioning the cables.
7. Wrap the cables around the wheel(s) on the distributor and also the cable wheel(s) in the hand control housing.

The number of wraps around each wheel is determine as follows: On large distributors double cable wheels are used in the hand control housing instead of a single wheel. If there are double wheels then the distributor will have a 4" wide wheel, otherwise the distributor will have a 2" wide wheel. The wheel size is determined at the factory depending on the number of cable wheel rotations it takes to completely swing the inner spout of the distributor from the far right to the far left positions. If it takes 5 turns or less then 2" wide cable wheels are used. The most it takes on a larger distributor is about 9 complete turns.

- A double wheel in the control panel is used with a large distributor to prevent the cables running to the distributor wheel from crossing over each other and binding.



CAUTION



The distributor is not designed to support spouting.

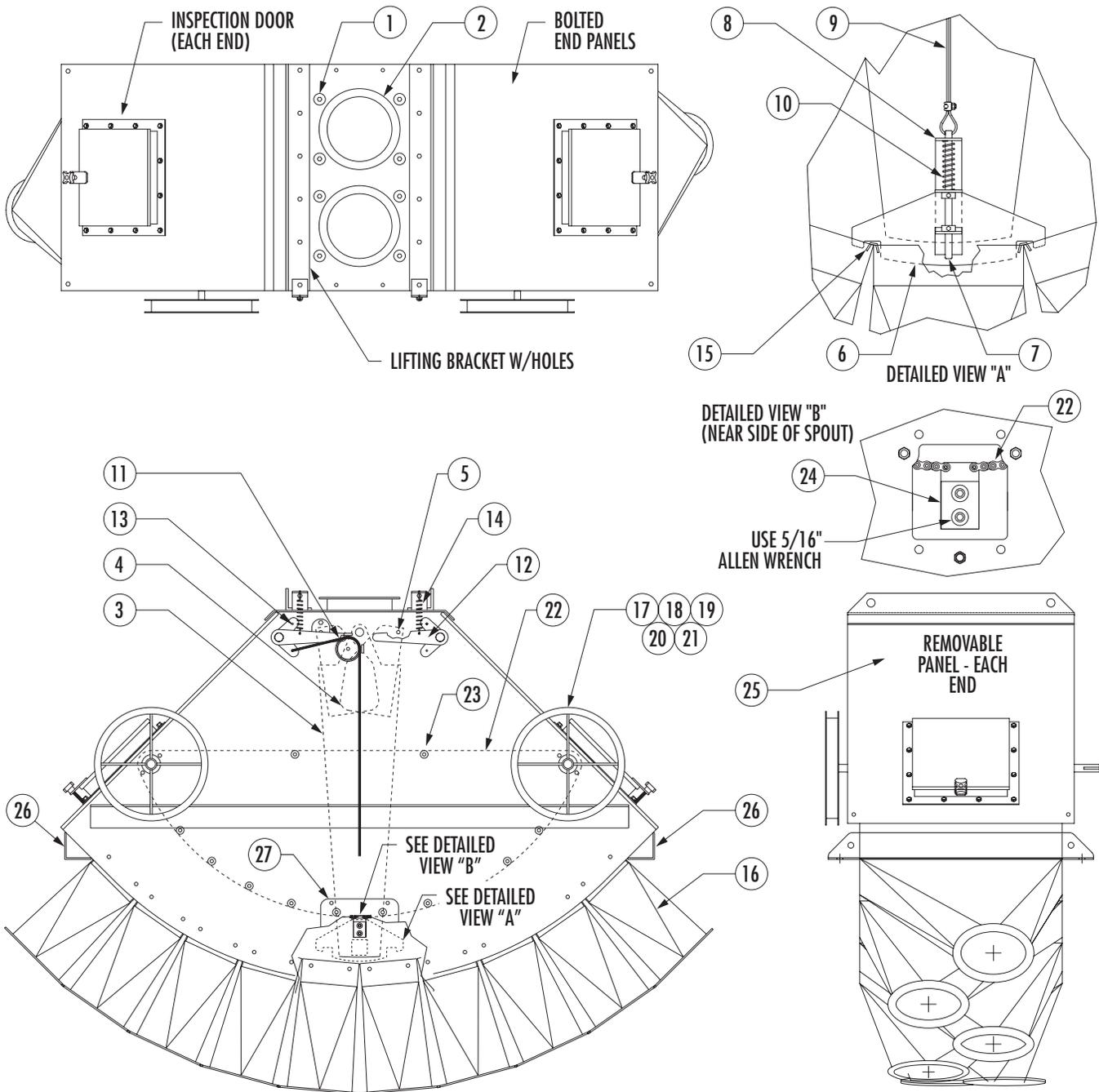
INSTALLATION - continued

8. Determine how many actual turns are needed on your distributor by pulling downward on the outer lever on the top side of the distributor that raises the end latching plate and then counting the number of turns that it takes to go from one far side to the opposite side.

You should leave the spout locked in either the far right or left position before proceeding to wrap the cable around the wheels.
9. The cable should be wrapped at least one complete turn around a cable wheel before putting the cable clamp bolt in the wheel to hold the cable in place. The initial direction of wrap around the wheel is determined by which way the wheel has to rotate in order to move the spout away from its far right or left position and which side of the cable wheel you started your initial wrap on.
10. Once the cable clamp bolt is tight then you should continue to wrap around the cable wheel with at least one more wrap than the actual wheel rotations needed. If you did not count the number of turns as directed in step 3.9, then wrap around 6 times on 2" wide cable wheels and 10 times on 4" wide cable wheels.
11. Keep in mind that each wrap around the wheel is about 3'-2" of cable. This means that if your distributor took 7 actual turns from end to end that you will need slightly over 22' between the cable clamps at the cable splice and any obstructions such as pulleys when the ends of the cable are finally connected together.
12. Make certain that any pulleys used in the cable line are properly positioned to prevent rubbing or binding of the cable. Lubricate the cable where it follows the pulleys. It is important to use as short a cable run as possible with as few turns around pulleys as possible to provide the best "feel" to the operator when moving the distributor spout.
13. Tighten the cable by pulling down on the control wheel housing and then tighten the side bolts in the slotted holes. **Be certain that the cable is not excessively tight as this will cause improper operation.**
14. Run the cable from the foot pedal to the outside lever on the top side of the distributor in a similar manner.
15. A set of number cards has been provided for field placement of a reference number onto the face of the sprocket that the pointer is pointing at. The inner spout should be moved to each of the duct openings and then a corresponding number placed on the sprocket face.
16. Once everything is in place and set you should run through each spout position to insure that the actual operator will be able to "feel" when the bearing on the end of the spout is locked in a duct.

SECTION 2 - ASSEMBLY AND INSTALLATION

SWINGSET DISTRIBUTOR - PARTS LIST



ITEM # DESCRIPTION

1. STEPPED WASHER
2. FLANGE (TYPICAL)
3. INNER SPOUT
4. SPOUT FLEXES
5. PIVOT RODS FOR FLEXES
6. LATCH PLATE
7. RELEASE PIN
8. PIN GUIDE
9. LIFTING CABLE

ITEM # DESCRIPTION

10. COMPRESSION SPRING
11. CABLE PULLEY
12. OUTER LEVER FOR RAISING LATCH
13. INNER LEVER FOR RAISING LATCH
14. EXPANSION SPRING
15. DUCT SEAL CHANNELS
16. DISCHARGE DUCTS
17. CABLE WHEEL
18. OPERATING SHAFTS

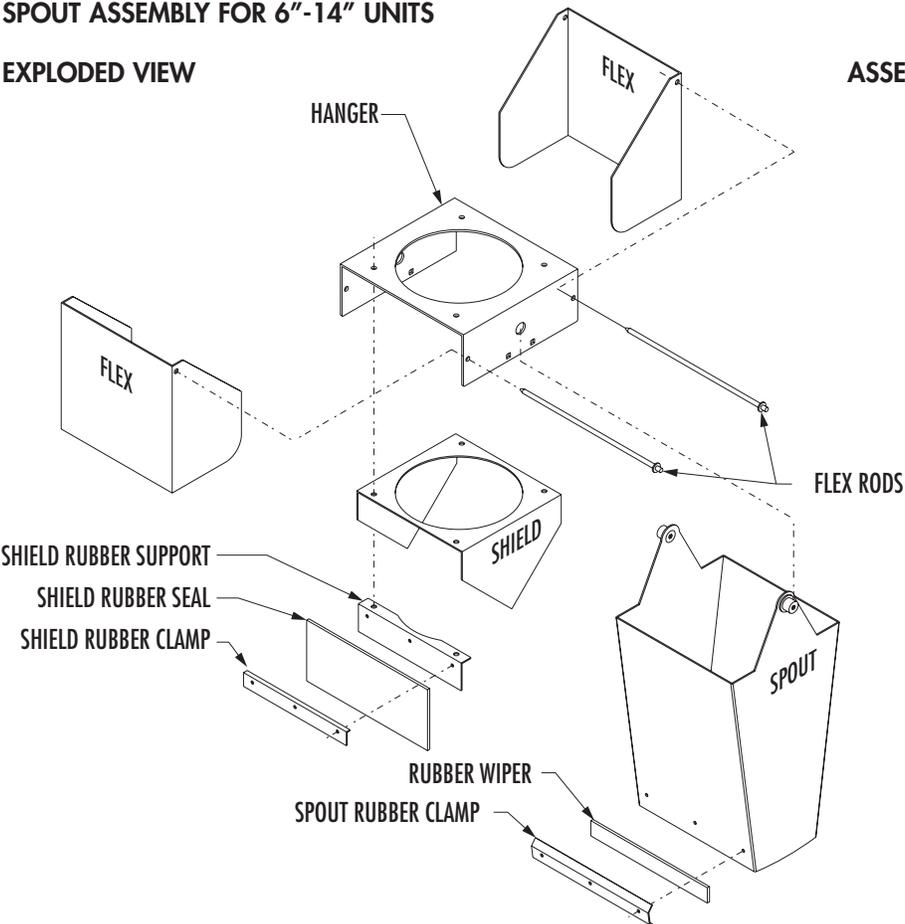
ITEM # DESCRIPTION

19. SHAFT BEARINGS
20. KEYED SPROCKET
21. IDLER SPROCKET
22. ROLLER CHAIN
23. UHMW CHAIN GUIDE
24. CHAIN BLOCK
25. REMOVABLE PANELS
26. SUPPORT ANGLES (2)
27. ACCESS DOORS (EACH SIDE)

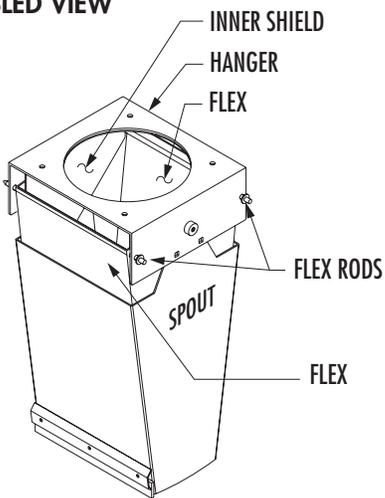
SWINGSET DISTRIBUTOR - SPOUT DETAIL

SPOUT ASSEMBLY FOR 6"-14" UNITS

EXPLODED VIEW



ASSEMBLED VIEW

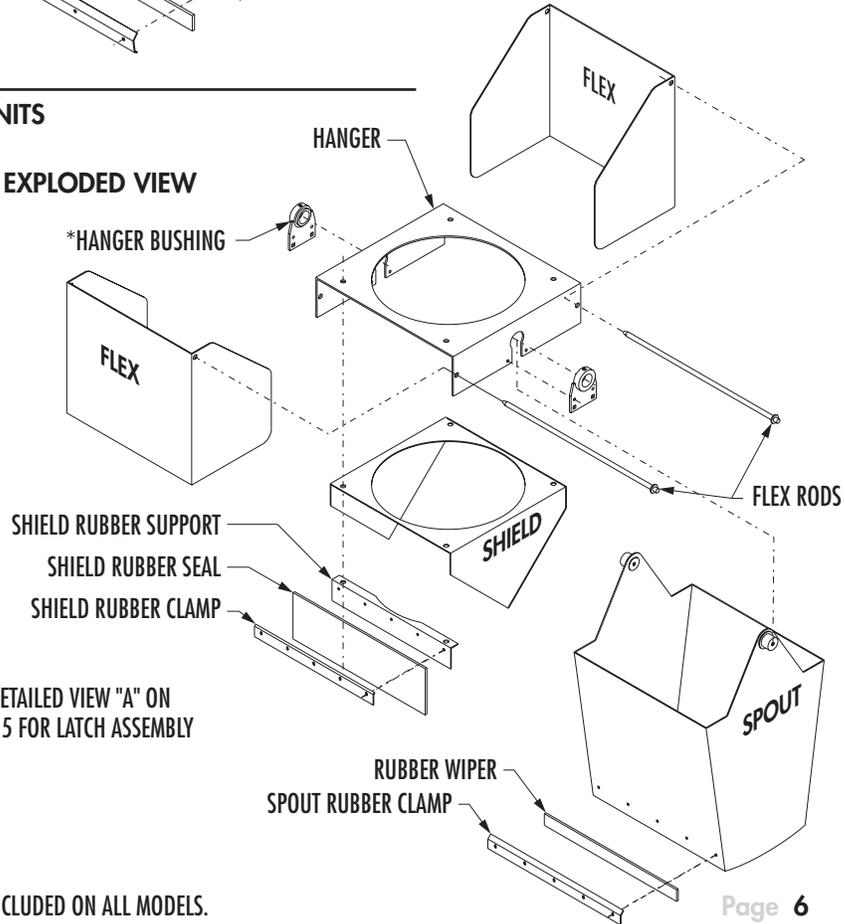


SEE DETAILED VIEW "A" ON PAGE 5 FOR LATCH ASSEMBLY

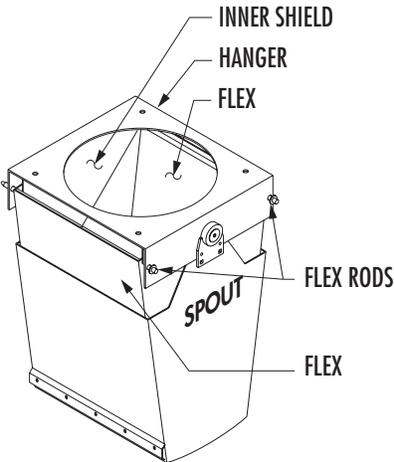
SPOUT ASSEMBLY FOR 16" AND LARGER UNITS

(or units with reduction drives)

EXPLODED VIEW



ASSEMBLED VIEW

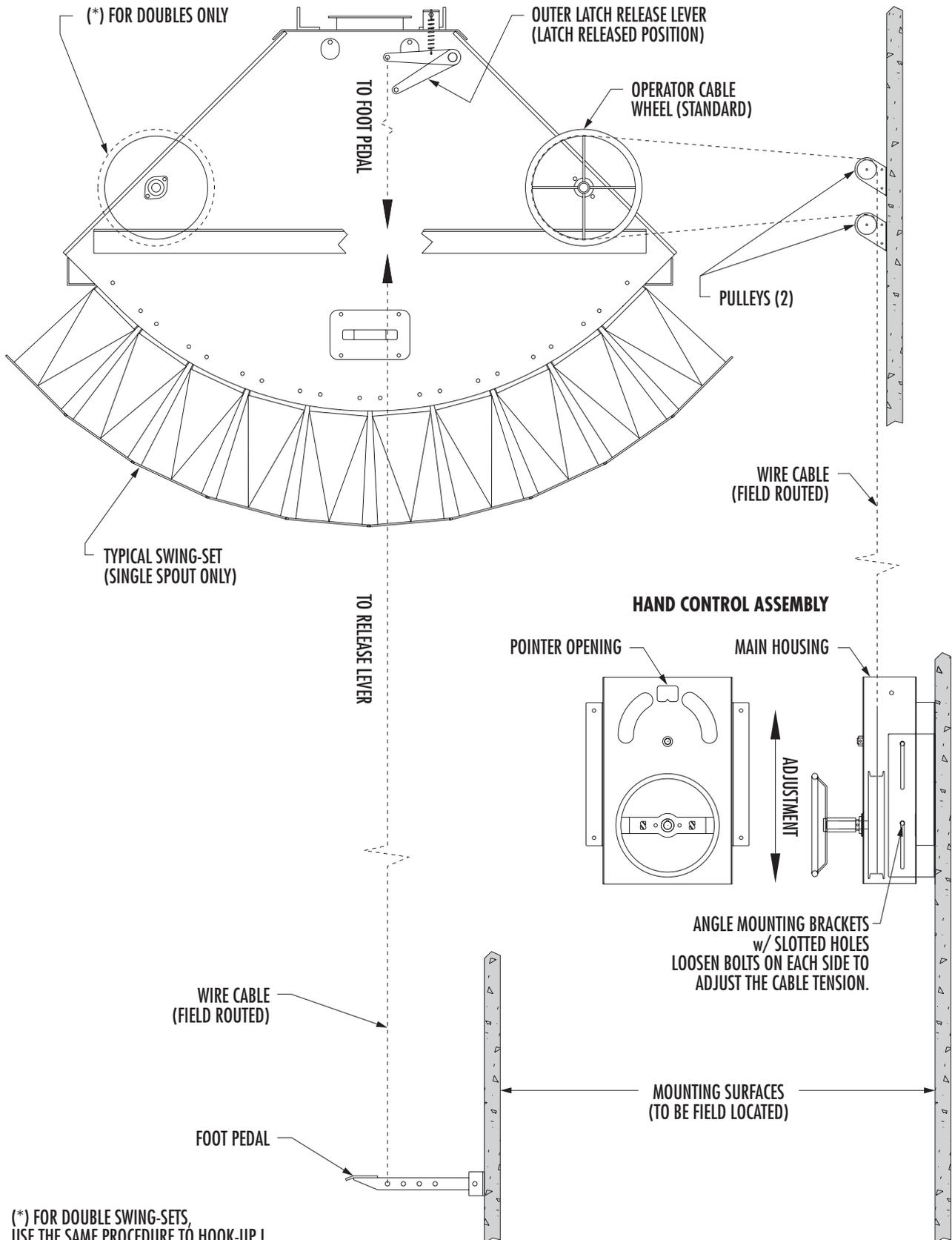


SEE DETAILED VIEW "A" ON PAGE 5 FOR LATCH ASSEMBLY

*NOTE: THE HANGER BUSHING IS NOT INCLUDED ON ALL MODELS.

SECTION 2 - ASSEMBLY AND INSTALLATION

TYPICAL CABLE RUN LAYOUT



OPERATION

1. Lift the inner spout duct locking plate with the lift pedal and turn the control wheel to move the spout near the desired position. Release the pedal and continue to turn the wheel. This will move the spout over the duct selected and will then allow the latch plate to drop into the duct opening.
2. With the SwingSet Distributor the operator does not have to be familiar with the "feel" of the distributor as the latch plate will slide into the duct with very little effort, and when the control wheel does not move the spout is set.

MAINTENANCE

1. Under normal operating conditions the SwingSet Distributor will not need attention as it is entirely self cleaning. All that is necessary to keep the unit functioning as it did when it was installed is to keep the remote operating cables in good condition and at the proper tension.
2. Occasionally check the swinging spout and associated wear points as you check other components in a scheduled maintenance program. Although this distributor is a most important component in your material flow, its superior operation will soon be taken for granted.

TROUBLE SHOOTING

PROBLEM #1 SPOUT MOVES HARD

- | | |
|-----------------|---|
| A-CAUSE: | CONTROL CABLES TOO TIGHT. |
| REMEDY: | LOOSEN CABLE UNTIL CONTROL WHEEL MOVES 1" EITHER DIRECTION WITH MODERATE PRESSURE. |
| B-CAUSE: | CABLES NOT LINED UP WITH PULLEYS. |
| REMEDY: | SEE (STEP 13) OF INSTALLATION. |
| C-CAUSE: | PLUGGED SPOUT |
| REMEDY: | DRAIN MATERIAL FROM SPOUT OR FORCE TO ANOTHER DUCT POSITION. |
| D-CAUSE: | INLET PLATE IS TILTED CAUSING SPOUT TO RUB AGAINST CHAIN GUIDES OF HOUSING. |
| REMEDY: | REWORK INLET TRANSITION TO DISTRIBUTOR SO AS TO ELIMINATE ANY TWISTING FORCE ON THE DISTRIBUTOR. IF THE INLET PLATE HAS BEEN PERMANENTLY DISTORTED THEN TRY CLAMPING A HEAVY ANGLE TO THE FLANGE AND PRYING BACK INTO CORRECT POSITION. |
| E-CAUSE: | SPOUT DOES NOT SWING PARALLEL TO THE BODY SO AS TO RUB AGAINST CHAIN GUIDES TOWARDS ONE END OF THE HOUSING. |
| REMEDY: | LOOSEN THE FOUR (4) BOLTS ON THE PLATE AROUND THE INLET, GO INSIDE AND ROTATE THE SPOUT BACK INTO ALIGNMENT AND THEN RETIGHTEN THE TOP BOLTS. |

PROBLEM #2 LATCH PLATE ON END OF SPOUT DOES NOT DROP DOWN

- | | |
|-----------------|---|
| A-CAUSE: | CONTROL CABLES TOO TIGHT. |
| REMEDY: | SEE ABOVE (PROBLEM #1 A) |
| B-CAUSE: | TOO MUCH WEIGHT FROM LIFT PEDAL CABLE. |
| REMEDY: | PUT A SPRING ASSIST UP BY THE DISTRIBUTOR ON EITHER THE OPERATING LEVER OR CABLE TO REDUCE THE DOWNWARD CABLE PULL. |

PROBLEM #3 INSIDE CHAIN JUMPS SPROCKET TEETH OR COMES OFF GUIDES ON SIDE OF HOUSING.

- | | |
|-----------------|---|
| A-CAUSE: | CHAIN TOO LOOSE. |
| REMEDY: | LOOSEN BOLTS HOLDING SHAFT BEARINGS AND PULL TOWARDS END OF SLOTTED HOLES. REMOVE A CHAIN LINK IF IT IS STILL TO LOOSE. |

SPOUT REMOVAL

Manually Operated Distributors

The inner spout can be removed through either of the removable end panels as follows:



Lock out distributor operator to prevent anyone from operating the unit while you are servicing it.

- A. Remove the end panels on both ends of the distributor.
- B. Move the spout to be removed to the center duct.
- C. Remove any cross bracing on the end that you wish to remove the spout through.
- D. Remove the small bolted side access door on side/bottom of main housing. (See detail, page 5)
- E. Using a piece of mechanics wire, wire the two chains ends so they don't fall.
- F. Take the tension off of the chain by loosening the bolts on the cross shaft bearings. These are the 1" shaft bearings located in the upper corners of the side panel.
- G. Remove both chain master links from the spout bracket.



Be sure to use appropriate safety device to protect from falling into distributor outlets. Falling into outlets may cause injury or death.

- H. Swing the spout to the last duct away from the side that you want to pull the spout out through. This will need to be done manually by climbing inside and pushing the spout while manually raising the spout end latch. The latch will hold the spout end in place.
- I. Loosen the cable clamp on the inner lever that raises the spout end latch plate and remove the cable.
- J. Swing away the obround hole cover at the top of the main housing on the same side that the spout is being removed through. Reach in with a pliers and pull out the long flex pivot rod while holding the flex so it doesn't fall. It is only necessary to remove this one flex for spout removal.

- K. Support the top of the spout so that it does not fall when bolts holding it are removed. Remove the nuts of the top support washers. Top washers should be marked with a scribe for ease of squaring the spout upon replacement.
- L. The spout should then incline down toward the opening you wish to remove it through. Now simply pull out the spout.

The reinstall the spout, reverse the above steps noting the following two instructions.

1. When installing the cable back on the locking lever for the spout, first move the spout to the last duct in the direction of the lever. Then put the cable through the arm and then through the cable clamp. Now just take the slack out of the cable and then tighten the clamp. This should put the cable in the right position to work properly.
2. Use care when putting the spout back in. The bolts on the top of the spout have ample room around them in order to properly align the spout. Make sure that the spout swings freely both directions and parallel to the sides. Make sure the spout is over far enough to the outside so that the chain tracks properly.

REMOVAL OF INNER FLEX ONLY

Manually Operated Distributors



Lock out distributor operator to prevent anyone from operating the unit while you are servicing it.

1. While supporting the flex from inside so it does not fall, reach in the hole in the flex rod access hole with a pliers and pull out the long flex pivot rod.
2. Remove flex.
3. Repeat for other flex if necessary.

ORDERING INFORMATION

Records are kept at the factory of all distributors shipped. When making reference to any distributor, indicate the serial and model numbers on the metal tag, the size and number of outlets, the number of inner spouts and the date purchased and the name of the supplier if not purchased direct by you.



Please contact our service department for help with any concerns or questions about your SwingSet® Distributor.

SCHLAGEL

491 North Emerson Street • Cambridge MN 55008-1316 U.S.A.
Toll Free (800) 328-8002 FAX (763) 689-5310
Local / International (763) 689-5991 EMAIL sales@schlagel.com
www.schlagel.com

©2023 Schlagel Inc. 8/23 Rev. C Printed in U.S.A.