Model 850/855 Series
Finisholl
Operator’s Manual
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Chapter 1

Introduction

The Landoll Model 850/855 Finisholl is a quality product designed to give years of trouble free performance. By following each section of this manual, your system will perform as designed for you and your operation.

CHAPTER 1
gives basic instructions on the use of this manual.

CHAPTER 2
gives product specifications. These specifications supply lengths and measures for your equipment. A Standard BoltTorque Table is provided to give guidelines for bolt torques to be used when servicing this product.

CHAPTER 3
contains assembly instructions for your Model 850/855 Finisholl. When these procedures are correctly followed, your equipment should provide you years of trouble-free operation and service.

CHAPTER 4
instructs how to operate your equipment before using it, and describes adjustments needed. It also gives practical advice for the care and maintenance of your Landoll equipment. Drawings in this section locate adjustment points on the equipment.

NOTE: IF THE EQUIPMENT IS IMPROPERLY ASSEMBLED OR MAINTAINED, THE WARRANTY IS VOID. IF YOU HAVE ANY QUESTIONS CONTACT:
LANDOLL CORPORATION
1900 NORTH STREET
MARYSVILLE, KANSAS 66508
or phone:
(785) 562-5381 or
(800) 428-5655
(888) 527-3909

CHAPTER 5
is a troubleshooting guide to aid in diagnosing and solving problems with the equipment.

PARTS LIST
is a separate manual showing the various assemblies, subassemblies, and systems. Refer to that manual when ordering Landoll replacement parts. Order parts from your Landoll dealer.

WARRANTY
The Warranty Registration form is included with the product documents. Fill it out and mail it within 15 days of purchase.

NOTE: IMPROPER ASSEMBLY, MODIFICATION, OR MAINTENANCE OF YOUR LANDOLL MACHINE CAN VOID YOUR WARRANTY.

COMMENTS
Address comments or questions regarding this publication to:
LANDOLL CORPORATION
1900 NORTH STREET
MARYSVILLE, KANSAS 66508
ATTENTION: PUBLICATIONS -DEPT. 55
Understanding Safety Statements

You will find various types of safety information on the following pages and on the machine signs (decals) attached to the vehicle. This section explains their meaning.

The Safety Alert Symbol means ATTENTION! YOUR SAFETY IS INVOLVED!

![DANGER]

**DANGER**

Danger means a life-threatening situation exists. Death can occur if safety measures or instructions on this label are not properly followed.

![WARNING]

**WARNING**

Warning means serious injury or death can occur if safety measures or instructions on this label are not properly followed.

![CAUTION]

**CAUTION**

Caution means serious equipment or other property damage can occur if instructions on this label are not properly followed.

**NOTE**

Means that failure to follow these instructions could cause damage to the equipment or cause it to operate improperly.

**NOTE**

Make sure you read and understand the information contained in this manual and on the machine signs (decals) before you attempt to operate or maintain this vehicle.

The safety statements contained in this manual relate to the operation of the Model 850/855 Finisholl.
## Chapter 2

### Standard Specifications

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<th>WORKING WIDTH</th>
<th>NO. OF SHANKS</th>
<th>NO. OF BLADES</th>
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STANDARD SPECIFICATIONS

LANDOLL CORPORATION
GENERAL TORQUE SPECIFICATIONS (REV. 4/97)

THIS CHART PROVIDES TIGHTENING TORQUES FOR GENERAL PURPOSE APPLICATIONS WHEN SPECIAL TORQUES ARE NOT SPECIFIED ON PROCESS OR DRAWING.

ASSEMBLY TORQUES APPLY TO PLATED NUTS AND CAPSCREWS ASSEMBLED WITHOUT SUPPLEMENTAL LUBRICATION (AS RECEIVED CONDITION). THEY DO NOT APPLY IF SPECIAL GRAPHITE MOLY-DISULFIDE OR OTHER EXTREME PRESSURE LUBRICANTS ARE USED.

WHEN FASTENERS ARE DRY (SOLVENT CLEANED), ADD 33% TO AS RECEIVED CONDITION TORQUE.

BOLT HEAD IDENTIFICATION MARKS INDICATE GRADE AND MAY VARY FROM MANUFACTURER TO MANUFACTURER.

THICK NUTS MUST BE USED ON GRADE 8 CAPSCREWS.

USE VALUE IN [ ] IF USING PREVAILING TORQUE NUTS.

**TORQUE IS SPECIFIED IN FOOT POUNDS**

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<th>UNC Size</th>
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<th>SAE Grade 5</th>
<th>SAE Grade 8</th>
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<th>SAE Grade 5</th>
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**METRIC**

COARSE THREAD METRIC CLASS 10.9 FASTENERS AND CLASS 10.0 NUTS AND THROUGH HARDENED FLAT WASHERS, PHOSPHATE COATED, ROCKWELL “C” 38-45.

USE VALUE IN [ ] IF USING PREVAILING TORQUE NUTS.

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Table 2-1: General Torque Specifications
### Table 2-2: Hydraulic Fitting Torque Specifications

**37° JIC, ORS, & ORB (REV. 10/97)**

**LANDOLL CORPORATION**

This chart provides tightening torques for hydraulic fitting applications when special torques are not specified on process or drawing. Assembly torques apply to plated carbon steel and stainless steel fittings assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used.

Brass fittings and adapters - 65% of the torque value for steel, stainless steel, aluminum and monel - threads are to be lubricated.

**Torque is specified in foot pounds**

#### PARKER BRAND FITTINGS

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<tr>
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<th>O-Ring (ORS)</th>
<th>O-Ring Boss (ORB)</th>
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<th>O-Ring Boss (ORB)</th>
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*Table 2-2: Hydraulic Fitting Torque Specifications*
Figure 2-1: 11’ Shank Placement Assembly
Figure 2-3: 16'-8" Shank Placement Assembly (1 of 2)
Figure 2-4: 16’-8” Shank Placement Assembly (2 of 2)
Figure 2-5: 19'-4'' Shank Placement Assembly (1 of 2)
Figure 2-6: 19’-4” Shank Placement Assembly (2 of 2)
Figure 2-7: 22' Shank Placement Assembly (1 of 2)
Figure 2-8: 22’ Shank Placement Assembly (2 of 2)
Figure 2-9: 24'-8" Shank Placement Assembly (1 of 2)
Figure 2-10: 24'-8” Shank Placement Assembly (2 of 2)
Figure 2-11: 27'-4" Shank Placement Assembly (1 of 2)
Figure 2-12: 27'-4" Shank Placement Assembly (2 of 2)
Figure 2-13: 30’ Shank Placement Assembly (1 of 2)
Figure 2-17: 33' Shank Placement Assembly (1 of 2)
Figure 2-18: 33' Shank Placement Assembly (2 of 2)
Figure 2-19: 35' Shank Placement Assembly (1 of 2)
Figure 2-20: 35' Shank Placement Assembly (2 of 2)
Figure 2-21: 41’ Shank Placement Assembly (1 of 4) (Left Outer Wing)
Figure 2-22: 41' Shank Placement Assembly (2 of 4)
(Left Inner Wing and Left Half Main Frame)
Figure 2-23: 41' Shank Placement Assembly (3 of 4)
(Right Inner Wing and Right Half Main Frame)
Figure 2-24: 41' Shank Placement Assembly (4 of 4)
(Right Outer Wing)
It is very important that your new 850/855 Series Finisholl be properly assembled, adjusted and lubricated before use. Illustrations to assist with the assembly process are provided in Section 2, “Standard Specifications”. They show proper shank, disc gang and mounting bracket spacings. Illustrations in this section show proper assembly procedures. Remove paint from grease fittings. Replace any grease fittings that are damaged or missing. Be sure to return screws, clips, etc., to their original locations.

To insure alignment of assemblies, leave the nuts loose until completion of final assembly. Use split lock washers or flat washers as specified. Spread all cotter pins.

After completion of final assembly, tighten all nuts evenly to prevent misalignment, distortion or binding. Tighten all screws and nuts to the recommended torques shown in Table 2-1.

**DANGER**

To prevent accidental lowering:
1. All hydraulically elevated equipment must be locked out using the cylinder lockouts:
2. Lower equipment to the ground while servicing or when it is idle.
Failure to take measures to prevent accidental lowering may result in serious personal injury or death.

**WARNING**

Do not attempt to lift heavy parts (such as the frame, disc gangs, rock shaft, and pull hitch) manually. Use a hoist or a fork lift to move these parts into position.

**CAUTION**

Be sure to bleed the hydraulic system of all air in lines after installation. Failure to bleed the system of all air can result in permanent equipment damage.

**CAUTION**

Incorrect adjustment of disc adjust rods will cause permanent equipment damage.
Figure 3-1: Frame Assembly (30’ to 41’ Models)
Frame Assembly (11’ Through 27’ Models)

1. No assembly is needed for the 850/855 Series Finisholl frame. However, it needs to be placed on stands approximately 36" high in an open level area. If your Finisholl is equipped with frame extensions, see “Wings and Extensions Installation” on page 3-6 for proper installation procedures.

**WARNING**

Do not attempt to lift heavy parts (such as the frame, disc gangs, rock shaft, and pull hitch) manually. Use a hoist or a fork lift to move these parts into position.

Frame Assembly (30’ Through 41’ Models)

**IMPORTANT**

Read all safety precautions at the front of the section before attempting any of the following procedures.

**IMPORTANT**

See Figure 3-1 for part names.

1. Place frame halves on stands approximately 36" high.
2. Bolt frame halves together using 3/4-10 X 2-1/2 screws and lock nuts (See Figure 3-1.)

**WARNING**

Do not attempt to lift heavy parts (such as the frame, disc gangs, rock shaft, and pull hitch) manually. Use a hoist or a fork lift to move these parts into position.
Figure 3-2: Rockshaft Installation, Frame

5/8-11 X 8-1/2 HEX HEAD CAP SCREW

11' - 27' MODELS

5/8 FLAT WASHER

5/8-11 HEX LOCK NUT

3/4-10 X 2-1/2 HEX HEAD CAP SCREW

3/4-10 HEX LOCK NUT

30' - 41' MODELS
Rockshaft Installation, Frame

**IMPORTANT**
Read all safety precautions at the front of the section before attempting any of the following procedures.

**IMPORTANT**
See Figure 3-2 for part names.

1. Install frame rockshaft, using bearing blocks, 5/8-11 X 8-1/2 screws, washers, shims, and lock nuts. The bearing half with the grease zerk in the side goes on top of the rockshaft with zerk to outside. Use only enough shims between bearing halves to allow rockshaft to rotate without binding (See Figure 3-2.)

2. When installing the rockshaft on 30’ through 41’ models, assemble the three sections of the rockshaft with 3/4-10 X 2-1/2 screws and lock nuts before installing in frame. Align rockshaft arms with each other before tightening screws (See Figure 3-2.)

3. Mount the tires on the wheels and install on the hubs.

4. Recommended tires:
   - 11’ through 27’ frame 9.5L X 15 8 ply
   - 30’ through 35’ frame 11L X 15 10 ply
     or
     12.5 X 15 12 ply
   - 41’ frame 12.5 X 15 12 ply
Wings and Extensions Installation

1. On 11’ units, install short (bolt on) shank extensions on rear corners of frame using 5/8-11 X 2 screws and lock nuts (See Figure 3-3.)

2. On 14’ units, install short (bolt on) shank extensions on rear corners of frame using 5/8-11 X 2 screws and lock nuts. Install clamp on extensions on side rails using u-bolts and lock nuts provided (See Figure 3-3.)

3. On 17’ to 35’ units, install wings using hinge pins, washers and cotter pins provided (See Figure 3-4.)

4. On 33’ (narrow frame) and 35’ units, install wing extensions on wings using u-bolt and nuts provided (See Figure 3-4.)

5. On 41’ units:
   a. Install inner wings to the frame using hinge pins, washers and cotter pins provided (See Figure 3-5.)
   b. Install outer wings to inner wings using lower radius rod pins, flat washers, and cotter pins in the top hole of the double fold hinge weldments (See Figure 3-5.)
   c. Install the wing fold brackets to the front and rear double fold hinge weldments using hinge pivot bolt, flat washer, and hex lock nut through the lower hole of each.
   d. The cylinders will be connected to the upper hole of the wing fold brackets later in the assembly.

Figure 3-3: Short Shank Extensions (11’ and 14’ Models)
Figure 3-4: Wing and Wing Extensions (17' - 35' Models)
Rockshaft Installation, Wings

1. To install the gauge wheel clamp on 17' units, fasten the gauge wheel clamp to the outer tube of the wing using U-bolts and nuts provided. Slide spindle assembly into place and pin at desired depth (See Figure 3-6.)

2. Install short rockshafts on wings using bearing blocks, 5/8-11 X 8-1/2 screws, washers, shims and lock nuts. Install the bearing half with the grease zerk in the side on top of the rockshaft. Use only enough shims between bearing halves to allow rockshaft to rotate without binding (See Figure 3-7.)

**IMPORTANT**

On 19' units position gauge wheels with spindle pointing outward. On 22' units position gauge wheels with spindle pointing inward. 25' and larger units use walking beams.

3. Mount tires on the wheels and install on hubs.

4. Recommended tires:
   - 17' wings 7.60 X 15 6 ply
   - 19' through 41' wings 9.5L X 15 8 ply
Hydraulic Installation

NOTE
See Figures 3-8 thru 3-16 and Table 3-1 thru Table 3-3 for hydraulic installation drawings.

1. Set the depth adjustment to a medium depth (insure that all are set to the same depth).
2. Install the master cylinders with the base end on the slide bars of the frame and the rod end on the arms of the rockshaft (See Figure 3-8.)
3. Install the slave cylinders with the base end on the slide bars of the wings and the rod end on the arms of the rockshaft (19' and larger units only) (See Figure 3-8.)
4. On 11' and 14' units, install 90° elbows and hoses as shown in Figure 3-11.
5. On 17' through 27' units:
   a. Install the fold cylinder bracket with four 3/4-10 X 3 screws and lock nuts (See Figure 3-9.)
   b. Install base end of 4 X 24 (17’ through 22’ models) or 5 X 24 (25’ and 27’ models) fold cylinders to fold bracket on frame with ports up. Pin rod end of cylinder to bracket on wings using extended pin, washers and cotter pins (See Figure 3-9.)
   c. Install manifold to bracket on frame using 1/2-13 X 3-1/2 screws and nuts (See Figure 3-9.)
   d. Install a restrictor O-ring elbow in each port of the fold cylinders (See Figures 3-12 and 3-13.)
   e. Install an O-ring elbow in each port of the lift cylinders (See Figures 3-12 and 3-13.)
   f. Install fittings in the manifold (See Figures 3-12 and 3-13.)
   g. Install hoses per Figures 3-12 and 3-13 for the size of unit assembled. Refer to Table 3-1 for 19’ - 27’ model hose lengths.

Figure 3-8: Master and Slave Cylinder Installation
Figure 3-9: Fold Cylinder Bracket (17' through 27')

Figure 3-10: Fold Cylinder Bracket (30' and Larger)
Figure 3-11: Hydraulic Installation (11'-14' Models)
Figure 3-12: Hydraulic Installation (17' Model)
Figure 3-13: Hydraulic Installation (19’ - 27’ Models)
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Table 3-1: Hydraulic Hose Installation for 850/855 Series (19' - 27' Models)
Figure 3-14: Hydraulic Installation (30’ - 35’ Models)
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Table 3-2: Hydraulic Hose Installation for 850/855 Series (30’ - 35’ Models)
Figure 3-15: Hydraulic Installation (Lift) (41' Model) (1 of 2)

NOTE: PLUG UNUSED PORTS

3-3/4 x 8 HYDRAULIC CYLINDER
HOSE ASSEMBLY (11)
4 X 8 HYDRAULIC CYLINDER
HOSE ASSEMBLY (12)
4-1/2 X 8 HYDRAULIC CYLINDER
HOSE ASSEMBLY (13)

MANIFOLD, 18 HOSE STRAIGHT ADAPTER
90 ELBOW
90 ELBOW

HOSE ASSEMBLY (14)
4-1/2 X 8 HYDRAULIC CYLINDER
HOSE ASSEMBLY (12)
4 X 8 HYDRAULIC CYLINDER
HOSE ASSEMBLY (11)
3-3/4 x 8 HYDRAULIC CYLINDER

HOSE ASSEMBLY (10)

A B G H
C D K L
F E I J
(A) (B) (G) (H)
(C) (D) (K) (L)
(F) (E) (I) (J)

NOTE: PLUG UNUSED PORTS
Figure 3-16: Hydraulic Installation (Fold) (41' Model) (2 of 2)
### 850/855 SERIES HYDRAULIC HOSE TABLE (41’ MODEL)

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Table 3-3: Hydraulic Hose Installation for 850 Series (41’ Model)
6. On 30’ through 35’ units:
   a. Install the fold cylinder bracket on the frame with U-bolts and lock nuts (See Figure 3-10.)
   b. Install base end of 5 X 24 fold cylinders to fold bracket on frame with ports up. Pin rod end of cylinder to bracket on wings using extended pin, washers and cotter pins (See Figure 3-9.)
   c. Install manifold to bracket on frame using 1/2-13 X 3-1/2 screws and nuts (See Figure 3-10.)
   d. Install a restrictor O-ring elbow in each port of the fold cylinders (See Figure 3-14.)
   e. Install an O-ring elbow in each port of the lift cylinders (See Figure 3-14.)
   f. Install fittings in the manifold per Figure 3-14.
   g. Install hoses per Figure 3-14 for the size of unit assembled. Refer to Table 3-2 for 30’-35’ model hose lengths.

7. On 41’ units:
   a. Install both fold cylinder brackets on the frame with U-bolts and lock nuts (See Figure 3-10.)
   b. Install base end of 5 X 24 fold cylinders to fold bracket on frame with ports up. Pin rod end of cylinder to bracket on inner wings using extended pin, washers and cotter pins (See Figure 3-9.)
   c. Install base end of 3-1/2 x 16 fold cylinders to fold brackets on inner wing with ports up. Pin rod end of each cylinder to top hole of wing fold brackets using a pivot bolt, flat washer, wing extension roller, and hex lock nut.
   d. Install 18 hose manifold to bracket on frame using 1/2-13 X 3-1/2 screws and nuts (See Figures 3-15 and 3-16.)
   e. Install both 8 hose manifolds to brackets on the inner wing using 1/2-13 X 3-1/2 screws and nuts (See Figure 3-16.)
   f. Install a restrictor O-ring elbow in each port of the fold cylinders (See Figure 3-16.)
   g. Install an O-ring elbow in each port of the lift cylinders (See Figure 3-15.)
   h. Install fittings in the manifold (See Figures 3-15 and 3-16.)
   i. Install hoses per Figures 3-15 and 3-16. Refer to Table 3-3 for hose lengths.
Figure 3-17: Shank, Clamp, and Sweep Assembly
Shank Installation

1. Mark shank locations per the shank placement drawing for your size unit (See Figures 2-1 through 2-24.)

2. Install shanks and clamps (See Figure 3-17.)
   a. Spring clamp assembly - Install clamp assembly to frame using U-bolt and serrated flange nuts. Install shank in clamp using 5/8-11X 1-3/4 screw and flange lock nut provided. To facilitate installation of the U-bolt nuts, remove the screw at the top of the spring and swing the spring out of the way.
   b. S-shank assembly - Clamp shank to frame with two plates, two 3/8-16 X 5 screws and one 5/8-11 X 5 bolt and nuts provided.
   c. C-spring assembly - Install C-spring on frame with clamp, bracket, 3/8-16 X 3-1/2 carriage bolt, 1/2-13 X 6 screws, and nuts provided. Install shank in C-spring using 5/8-11 X 2 screw and flange lock nut provided.

3. Install sweep on shank with 7/16-14 X 1-1/2 screws, washers and nuts provided.
SMV Bracket Installation

1. Install the SMV brackets close to the center of machine on rear frame member. Bolt together SMV mounting bracket and warning light bar with 1/2-13 x 5-1/2 hex head cap screws and 1/2-13 hex lock nuts through holes in bracket parts so that brackets are snug around frame member (See Figure 3-18.)

2. Attach SMV emblem to SMV mounting bracket using 1/4-20 x 1 hex head cap screw and 1/4-20 hex lock nut.

Figure 3-18: SMV Bracket Installation
**Disc Gang Installation, 850 Series**

1. Place disc gangs in front of unit in their approximate position. Position the disc on the main frame to throw soil outward (main frame gang have nut on only one end of the gang bolt). Position the wing disc gangs to throw soil inward (wing gangs have nuts on both ends).

**IMPORTANT**

When disc gangs are positioned correctly the bearing grease zerks will be pointing to the rear.

2. Install disc gangs to frame and wings using bearing blocks, 5/8-11 X 8-1/2 screws, shims, washers, and nuts. Install the bearing half with the grease zerk in the side on top of the rockshaft.

3. If manually adjusted install ratchet jacks to anchor on frame or wing and to arm on disc rockshafts using pins and cotter pins. *(See Figure 3-19.)*

4. If hydraulically adjusted single fold (17' - 35') models, install cylinders per Figures 3-21 and 3-22.
   a. Install the master cylinder on the left wing. Pin the base end of the cylinder to the bracket on the wing and the rod end to the arm on the disc rockshaft.
   b. Install the slave 1 cylinder on the right wing. Pin the base end of the cylinder to the bracket on the wing and the rod end to the arm on the disc rockshaft.
   c. Install the slave 2 cylinder on the right side of the main frame. Pin the base end of the cylinder to the bracket on the frame and the rod end to the arm on the disc rockshaft.
   d. Install the slave 3 cylinder on the left side of the main frame. Pin the base end of the cylinder to the bracket on the frame and the rod end to the arm on the disc rockshaft.
   e. With the cylinders fully extended, adjust the screw adjust on the wing disc rockshafts until the wing discs are to the same depth below the frame as the discs on the main frame.
   f. Install a 90° elbow in the ports of each cylinder.
   g. Install hoses as shown on the shank placement drawing for your size of machine.

---

**Figure 3-19: Ratchet Jack Installation**
Figure 3-20: Disc Gang Assembly, 850 Series
Figure 3-21: Adjustment Cylinder Installation
Figure 3-22: Disc Gang Hydraulic Assembly
5. If hydraulically adjusted double fold (41' model), install cylinders per Figures 3-21 and 3-22.
   a. Install the master cylinder on the left outer wing. Pin the base end of the cylinder to the bracket on the outer wing and the rod end to the arm on the disc rockshaft.
   b. Install the slave 1 cylinder on the right outer wing. Pin the base end of the cylinder to the bracket on the outer wing and the rod end to the arm on the disc rockshaft.
   c. Install the slave 2 cylinder on the right inner wing. Pin the base end of the cylinder to the bracket on the inner wing and the rod end to the arm on the disc rockshaft.
   d. Install the slave 3 cylinder on the right side of the main frame. Pin the base end of the cylinder to the bracket on the frame and the rod end to the arm on the disc rockshaft.
   e. Install the slave 4 cylinder on the left side of the main frame. Pin the base end of the cylinder to the bracket on the frame and the rod end to the arm on the disc rockshaft.
   f. Install the slave 5 cylinder on the left inner wing. Pin the base end of the cylinder to the bracket on the inner wing and the rod end to the arm on the disc rockshaft.
   g. With the cylinders fully extended, adjust the screw adjust on the wing disc rockshafts until the wing discs are to the same depth below the frame as the discs on the main frame.
   h. Install a 90° elbow in the ports of each cylinder.
   i. Install hoses as shown on the shank placement drawing for your size of machine.

6. Install depth gauge as shown in Figure 3-20.

**IMPORTANT**

Depth gauge should be mounted on inside bearing block on main frame.
Figure 3-23: Coulter Assembly, 855 Series
Coulter Assembly, 855 Series

IMPORTANT
See Figure 3-23 for part names.

1. Roll one of the coulter gangs under the front of the frame. Refer to the drawing which came with your machine for location of different length coulter gangs. Position coulter gang with arm to align with bracket on frame.

IMPORTANT
When disc gangs are positioned correctly the bearing grease zerks will be pointing to the rear.

2. Install disc gangs to frame and wings using bearing blocks, 5/8-11 X 8-1/2 screws, shims, washers, and nuts. Install the bearing half with the grease zerk in the side on top of the rockshaft.

3. If manually adjusted install ratchet jacks to anchor on frame or wing and to arm on disc rockshafts using pins and cotter pins (See Figure 3-19.)

4. If hydraulically adjusted 17' - 35' models, install cylinders per Figures 3-21 and 3-22.
   a. Install the master cylinder on the left wing. Pin the base end of the cylinder to the bracket on the wing and the rod end to the arm on the disc rockshaft.
   b. Install the slave 1 cylinder on the right wing. Pin the base end of the cylinder to the bracket on the wing and the rod end to the arm on the disc rockshaft.
   c. Install the slave 2 cylinder on the right side of the main frame. Pin the base end of the cylinder to the bracket on the frame and the rod end to the arm on the disc rockshaft.
   d. Install the slave 3 cylinder on the left side of the main frame. Pin the base end of the cylinder to the bracket on the frame and the rod end to the arm on the disc rockshaft.
   e. With the cylinders fully extended, adjust the screw adjust on the wing disc rockshafts until the wing discs are to the same depth below the frame as the discs on the main frame.
   f. Install a 90° elbow in the ports of each cylinder.
   g. Install hoses as shown on the shank placement drawing for your size of machine.

5. Install depth gauge as shown in Figure 3-20.

IMPORTANT
Depth gauge should be mounted on inside bearing block on main frame.
Figure 3-24: Pull Hitch Installation
Pull Hitch Installation

[IMPORTANT]
See Figure 3-24 for part names.
1. Install pull hitch to frame using hitch pins and cotter pins.
2. Assemble the hitch ring to the pull hitch as shown with the recess down.
3. Install jack on pull hitch. Do not overtighten U-bolts on jack. It will cause jack to bind.

[IMPORTANT]
Use jack mounting tube on right side of pull hitch for correct angle on jack.
4. Install hose bracket and hose bracket mount on pull hitch with special nut, screw, and lock nuts.
Figure 3-25: Leveling Assembly Installation

- 3/8-16 X 3-1/2 HEX HEAD CAP SCREW
- PIVOT BRACKET
- LEVELING SPRING
- PIVOT BLOCK
- SPRING BUSHING
- 1-1/2 FLAT WASHER
- LEVELING SPRING
- 1-1/2-6 HEX NUT
- 1-1/2-6 HEX JAM NUT
- LEVELING ROD
- PIN
- RADIUS ROD
- 3/8-16 HEX LOCK NUT
- PUSH BACKING
- 1/4 X 2-1/2 COTTER PIN
- PIN
- 1-8 HEX LOCK NUT
- PULL HITCH
- 1-8 X 7-1/2 HEX HEAD CAP SCREW
- MAST
- PIVOT BLOCK BUSHING
- 1" FLAT WASHER
- 1" SPLIT LOCK WASHER
- 1-8 X 4 HEX HEAD CAP SCREW

2ma410-011267
Leveling Assembly Installation

**IMPORTANT**

See Figure 3-25 for part names.

1. Install the spring bushing in the pivot block.
2. Lightly coat the threads of the 1"-8 X 4 screws with loctite. Use the screws, flat washers and split lock washers to secure the pivot block bushings and the pivot block between the arms extending from the gauge wheel rockshaft.
3. Assemble the pivot bracket on the front bolt and bushing in the mast with the short arm up and forward as per decal on bracket. Failure to do so will cause damage.
4. Slide a leveling spring onto the threaded end of the leveling rod.
5. Slide the leveling rod into the pivot block and pin to the pivot bracket with a pin and 3/8-16 X 3-1/2 screw and lock nut.
6. Install a washer, leveling spring, washer, nut and jam nut on the leveling rod. Thread the nut completely onto the leveling rod and lock with a jam nut.
7. Install the radius rod between the pull hitch and the upper end of the pivot bracket with pins, cotter pins and a 3/8-16 X 3-1/2 screw and lock nut.
Figure 3-26: Hydraulic Radius Rod
Optional Hydraulic Radius Rod

IMPORTANT
See Figure 3-26 for part names.
1. Remove the clevis from the cylinder rod, apply loctite to the threads, and assemble the cylinder to the radius rod.
2. Remove the nuts from the two tie screws on the left side of the cylinder on the rod end and install the gauge bracket.
3. Install the 1-1/4” O.D. bushing inside the 1-5/8” O.D. bushing in the upper end of the pivot bracket.
4. Install the base end of the cylinder to the upper end of the pivot bracket.
5. Install the adjustable end of the radius rod to the pull hitch with the pin and cotter pins.

<table>
<thead>
<tr>
<th>HARNESS STOR-AWAY</th>
<th>SELF LOCKING TIE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN WARNING LIGHT HARNESS</td>
<td></td>
</tr>
<tr>
<td>REAR WARNING LIGHT HARNESS</td>
<td></td>
</tr>
<tr>
<td>HARNESS EXTENSION (30' - 41' MODELS)</td>
<td></td>
</tr>
</tbody>
</table>

### Wiring Chart

<table>
<thead>
<tr>
<th>7-PIN CONNECTION</th>
<th>4-PIN CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRND. 1</td>
<td>A</td>
</tr>
<tr>
<td>YEL. 3</td>
<td>B</td>
</tr>
<tr>
<td>GRN. 5</td>
<td>C</td>
</tr>
<tr>
<td>BRN. 6</td>
<td>D</td>
</tr>
</tbody>
</table>

Figure 3-27: Warning Light Installation
Warning Lights Installation

1. Assemble lights to the light bracket using 1/4 X 1-3/4 cap screws and nuts. Insure the wires are in the groove in the base of the light toward the mounting surface on the bracket. Assemble one light for left side and one for right side. The red light should be to the rear with the amber light being the outer most light.

2. Install the assembled lights on the outside of the frame just forward of the rear hinge using bar and 1/2-13 x 3-1/4 and 3-1/2 cap screws (4-1/2” long screws used on 30’ - 41’ models) and nuts. (See Figure 3-27.)

**IMPORTANT**
Make sure lights are positioned for maximum visibility from the rear.

3. Install the rear wiring harness between the lights.

**NOTE**
30” extensions are required on each side on 30’ through 41’ models.

4. Install the main harness by starting at the hitch and routing the harness through the hose loops to the extension harness.

5. Insure the harnesses are clear of any moving parts and secure the harnesses with tie wraps provided.
Figure 3-28: Rear Hitch Assembly (Option)
Rear Hitch Assembly (Option)

1. Install rear hitch in center of frame at the rear of the unit. Clamp hitch to the rear tube and the next tube forward with U-bolts, washer, and 5/8-11 nuts provided (See Figure 3-28.)
2. Install hitch in the forward position if you have a coil tine harrow or 3-bar spike harrow. Install in the rear position if you have a 5-bar spike harrow.

IMPORTANT

The center arm for some harrows may need to be moved to the side to make room for the rear hitch.

Harrow Assembly Installation

1. See Table 3-4 and Table 3-5 for the drawing number or page number of the assembly drawing that will be shipped with your harrow. If lost or missing, this drawing can be ordered from Landoll Corporation.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>DRAWING NUMBER</th>
<th>PAGE NUMBER BY FRAME SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 BAR COIL</td>
<td>2-410-010914</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>3 BAR COIL</td>
<td>2-410-010918</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>TILLOLL</td>
<td>2-410-011142</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>5 BAR SPIKE</td>
<td>2-410-010958</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>3 BAR SPIKE</td>
<td>2-410-010959</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
</tbody>
</table>

850/855 SERIES HARROW ASSEMBLY DRAWINGS

<table>
<thead>
<tr>
<th>OPTION</th>
<th>DRAWING NUMBER</th>
<th>PAGE NUMBER BY FRAME SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11' 14' 17' 19' 22' 25' 27' 30' 33'N 33'W 35'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 BAR COIL</td>
<td>2-410-010914</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>3 BAR COIL</td>
<td>2-410-010918</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>TILLOLL</td>
<td>2-410-011142</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>5 BAR SPIKE</td>
<td>2-410-010958</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>3 BAR SPIKE</td>
<td>2-410-010959</td>
<td>2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
</tbody>
</table>

Table 3-4: Harrow Assembly Drawings

<table>
<thead>
<tr>
<th>CHAIN SPIKE HARROW ASSEMBLY (DRAWING NUMBER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11' 14' 17' 19' 22' 25' 27' 30' 33'N 33'W 35' 41'</td>
</tr>
<tr>
<td>104768 104769 104770 104771 104772 104773 104774 104775 104776 104777 104778 104779</td>
</tr>
</tbody>
</table>

Table 3-5: Chain Spike Harrow Assembly Drawings
Notes:
Chapter 4

Operation and Maintenance

**DANGER**

Never allow anyone to ride on the 850/855 Series Finisholl at any time. Allowing a person to ride on the machine can inflict serious personal injury or death to that person.

**DANGER**

Disc blades are extremely sharp. Exercise extreme care when working on or near disc blades. Do not allow discs to roll over or fall onto any bodily part. Do not allow wrenches to slip when working near disc blades. Never push wrenches toward disc blades. Do not climb over machine above disc blades. Failure to stay clear of disc blade edges can cause serious personal injury or death.

**DANGER**

All hydraulically elevated equipment must have cylinder lockouts installed or be lowered to the ground, when servicing or when equipment is idle. Failure to take preventive measures against accidental lowering can result in serious personal injury.

**DANGER**

Always lock the tractor drawbar in the center position when transporting the unit. Failure to do so can result in serious injury or death and cause damage to the equipment.

**DANGER**

When transporting the unit, place cylinder lockouts in the transport lock position after fully extending the cylinders. Insert the lockout pins to secure the cylinder lockouts. Failure to lockout the cylinders can cause the unit to settle during transport, which can result in serious injury or death and cause damage to the equipment.

**CAUTION**

When transporting farm implements on public roads, it is the responsibility of the operator to abide by state and local laws concerning wide loads, speed, safety emblems and safety lighting equipment. Drive at safe speeds. Particularly when rounding corners, crossing rough ground or driving on hillsides, to prevent tipping the tractor.
OPERATION AND MAINTENANCE

Tractor Preparation

The Landoll 850/855 Series Finisholl is designed to be pulled by tractor equipped with a double lip or clevis type hitch. If your tractor is not equipped as such, you need to purchase the hitch from your local tractor dealer. If your Finisholl is equipped with the clevis option, this should be removed. The clevis option is only for transport use. Before attaching the Finisholl, prepare the tractor as follows:

1. Inflate the rear tractor tires equally and add ballast according to the tractor operator’s manual.
2. Lock the tractor drawbar in the center position.

Finisholl Preparation

1. Prior to operating the 850/855 Series Finisholl, inspect it thoroughly for good operating condition.
2. Replace worn or missing parts.
3. When the machine is new, check the bolt tightness after a few hours of operation. Tighten any loose nuts or bolts. Check the gauge wheel lug bolts daily.
4. Check the gauge wheel tire inflation. Inflate all tires equally to avoid side draft. Follow the tire manufacturer’s recommended pressures listed on the sidewall of the tires.
5. Check disc/coulters for proper adjustment to the disc blade (See Figure 4-1.) To adjust the pressure of the disc/coulters, loosen the u-bolts that clamp the assembly to the disc/coulters and slide the scraper assembly into the disc blades. Only enough pressure is required to keep the disc blades clean. The scraper blades are reversible to allow extended use before replacement is required.
6. Lubricate the machine as shown in “Lubrication” on page 4-8 (See Figure 4-10.)

Figure 4-1: Disc Scraper Adjustment to Disc Blade

[Diagram of Disc Scraper Adjustment to Disc Blade]
Attaching to the Tractor

1. Align the tractor drawbar with the machine. Raise or lower the Finisholl ring hitch, as needed, using the swivel jack. Attach the unit with proper size hitch pin.
2. Clean all hydraulic couplings and attach to the tractor. When properly attached, the hydraulic control lever should cause the Finisholl to:
   a. Lower to the ground when the control arm is moved forward or downward, and
   b. Raise when the control arm is moved backward or upward.
3. Fully extend the hydraulic gauge wheel cylinders, and place the cylinder lockouts in the transport lock position over the cylinder rods. Secure the lockouts with the lockout pins (See Figure 4-2.)
4. Always place the swivel jack on the interior mount before setting the machine in motion.

Field Operation

1. Raise the unit to take the weight off of the transport locks. Remove the transport locks from the lift cylinders (on the main frame only). Store the transport locks on the front hinge brackets (See Figure 4-2.)
2. Remove the wing lock pins and store in the extra hole in the hinge bracket. Unfold the wings and extend the fold cylinders completely (See Figure 4-2.)

![Figure 4-2: Transport Locks](image)

**CAUTION**

Failure to remove wing lock pins before unfolding wings will cause permanent equipment damage.

3. Check the front to rear leveling of the frame. Adjust radius rod until frame is level at working depth and lock it with the jam nut.
4. Set the unit working depth.
   a. To adjust the depth, lower unit to the ground and completely retract the lift cylinders.
   b. Screw the adjustment rod in to decrease the working depth, out to increase the working depth. (See Figure 4-3.)

   ![ADJUSTMENT ROD](image)

   **Figure 4-3: Adjusting Unit Working Depth**

   **CAUTION**

   The two adjustment rods on the main frame must be adjusted equally or permanent equipment damage will result.

   **IMPORTANT**

   It may be necessary to adjust the wings different than the main frame for the unit to operate level.

5. Always lift the Finisholl completely out of the ground before turning or backing. This prevents shank or disc damage or damage to their respective mounting brackets.

6. Reduce speed at field ends, and lift the Finisholl completely out of the ground before turning.

7. After a few hours of operation, check all bolts for tightness, especially the shank U-bolts and pivot bolts. Tighten wheel lug bolts to 90 ft.-lbs. of torque. Tighten any loose bolts to the torques shown in Table 2-1 and Table 2-2.
8. **Hydraulic Disc Operation.**
   a. Lower the discs and hold the valve until all cylinders are completely extended. Then raise the discs.
   b. Lower the machine until the shanks are at the desired working depth.

**IMPORTANT**

*Use the depth gauge for relative depth of discs. It does not indicate actual depth of discs.*

   c. Position the discs at desired depth by extending or retracting the disc adjust hydraulic cylinder(s).
   d. Adjust the wing discs to operate at the same depth as the center discs by adjusting the screw adjust on the wing disc rockshafts *(See Figure 3-21.)*
   e. Manually adjust discs: Adjust the ratchet jack on each disc gang to the desired depth. Insure that all discs are set at the same depth.

![Figure 4-4: 1,200 Foot-Pounds of Torque](image)

9. **Scrapers:** Loosen the U-bolts that hold the scraper assembly in place. Slide the scraper assembly toward the disc blades until there is enough pressure on the scrapers to clean the discs.

10. **Harrow**
    a. **Coil Tine (3 and 4 bar):** Position the spring anchor bolt to get the desired pressure on the harrow teeth. Position bolt in the harrow linkage assembly so that the harrow assembly is level. Place the stop bolt to get the desired angle on the harrow teeth *(See Figure 4-5.)*
    b. **Spike Tooth Drag Harrow (3 and 5 bar):** Adjust the harrow up or down until the lower portion of the harrow frame is level with the ground when the unit is at working depth *(See Figure 4-6.)*
    c. **Spike Harrow (Tilloll style):** The harrow as assembled is set for a working depth of 3 to 5 inches. Adjust the harrow up or down to change the working depth. Spring tension can be increased by reducing the number of chain links between spring and anchor bolts. Adjust the angle of the harrow teeth placing clevis pin and cotter pin in one of three holes in the harrow adjustment brackets *(See Figure 4-7.)*
    d. **Chain Spike Harrow:** The harrow height may be adjusted be removing the 1/2-13 x 1-1/4 hex head cap screw, flat washer, and hex lock nut on the chain and moving it up or down a link. The leading chain can be adjusted with a quick pin inserted in the top or bottom slot. Recommend a test run in the field for accurate adjustment settings *(See Figure 4-8.)*

---

**CAUTION**

Tighten all 1-1/2" nuts to 1200 foot-pounds of torque *(See Figure 4-4.)*
Figure 4-5: 5 Coil Tine Harrow

Figure 4-6: Spike Harrow (3 Bar and 5 Bar)
**Figure 4-7: Spike Harrow (Tilloll Style)**

- SPRINGS
- CHAINS
- ANCHOR BOLTS
- ADJUSTMENT BRACKET
- CLEVIS PIN

**Figure 4-8: Chain Spike Harrow**

- 1/2-13 X 1-1/4 HEX HEAD CAP SCREW
- 1/2 FLAT WASHER
- 1/2-13 HEX LOCK NUT
- 1/2-13 X 5 J-BOLT
- QUICK PIN
- 5/8-11 X 2-1/4 HEX HEAD CAP SCREW
- 5/8-11 U-BOLT
- 5/8 FLAT WASHER
- 5/8-11 HEX LOCK NUT

1/2-13 X 1-1/4 HEX HEAD CAP SCREW
1/2 FLAT WASHER
1/2-13 HEX LOCK NUT
1/2-13 X 5 J-BOLT

5/8-11 X 2-1/4 HEX HEAD CAP SCREW
5/8-11 U-BOLT
5/8 FLAT WASHER
5/8-11 HEX LOCK NUT
Wheel Bearing Maintenance

Wheel bearing maintenance should be performed at the beginning of every season of use. Check the wheel bearings periodically for excessive end play. If needed, adjust or replace them using the following procedure:

1. Place the frame on blocks or stands sufficient to lift the tire clear of the ground.
2. Remove the hub cap, cotter pin, slotted nut and washer.
3. Remove the hub. Clean and inspect the bearings and hub cavity. Replace any worn or defective parts.
4. Repack the bearings using a high-quality wheel bearing grease.
5. Replace the hub with a new seal and the inner bearing in place.
6. Install the outer bearing cone, washer and slotted nut.
7. Tighten the slotted nut while rotating the hub until there is a slight resistance to wheel rotation. Then, back the slotted nut off one notch, until the wheel rotates freely without end play.
8. Install a new cotter pin and replace the hub cap.

Hydraulic Maintenance

1. Check the tractor hydraulic fluid level per tractor owners manual and after any leakage. Check fluid level with the cylinders in the retracted position.
2. If a cylinder or valve leaks, disassemble the parts to determine the cause of the leak. Any time a cylinder is opened up, or whenever any seal replacement is necessary, it is advisable to clean all parts and replace all seals. Seal kits are available from your Landoll dealer.
3. Check all hydraulic hoses weekly. Look for binding or cracking. Replace all worn or defective parts immediately.

Transport

1. Raise the unit to full transport height.
2. Fold the wings and install the wing lock pins (See Figure 4-2.)
3. Place the transport lock brackets on the rods of the lift cylinders on the main frame and pin in place (See Figure 4-9.)

**WARNING**

Failure to use transport lock pins during transport may result in permanent equipment damage, serious injury, or death.

![Figure 4-9: Frame Lift Cylinders](image)

Lubrication

1. The following table specifies the number and the period of lubrication points on the 850/855 Series Finisholl. Proper maintenance of your machine will, under normal operating conditions, help to keep it operating at or near its peak performance for an extended period of time. Proper maintenance is also a condition of keeping your warranty in good status. (See Figure 4-10.)
<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>NO. OF LUBE POINTS</th>
<th>INTERVAL (HOURS UNLESS STATED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Radius Rod</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Pivot Bracket (Mast)</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Pivot Block (Rockshaft)</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Rockshaft Bearing Blocks (Frame)</td>
<td>2 each</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Rockshaft Bearing Blocks (Wings)</td>
<td>2 each</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Walking Beams</td>
<td>1 each</td>
<td>50</td>
</tr>
<tr>
<td>7</td>
<td>Disc Gang Bearings</td>
<td>1 each</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Disc Rockshaft Bearing Blocks</td>
<td>2 each</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Basket Bearings (Not Shown)</td>
<td>1 each</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Ratchet Jacks (Disc Adjust)</td>
<td>2 each</td>
<td>50</td>
</tr>
<tr>
<td>11</td>
<td>Wheel Bearings</td>
<td>Each</td>
<td>Yearly</td>
</tr>
</tbody>
</table>

Note: Lube all points with high grade multi-purpose grease.

Table 4-1: Lubrication Schedule
Storage

1. The service life of the Fi nisholl will be extended by proper off-season storage practices. Prior to storing the unit, complete the following procedures:
   a. Completely clean the unit.
   b. Inspect the machine for worn or defective parts. Replace as needed.
   c. Repaint all areas where the original paint film is worn off.
   d. Grease all exposed metal surfaces of shanks, points and discs.
   e. Lubricate each point of the machine as stated in “Lubrication” on page 4-8.

2. Store the unit in a shed or under a tarpaulin to protect it from the weather. The ground tools and tires should rest on boards, or some other object, to keep them out of the soil.
The Troubleshooting Guide, shown below, is included to help you quickly locate problems that can happen using your 850/855 Series Finisholl. Follow all safety precautions stated in the previous sections when making any adjustments to your machine.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>PROBABLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIELD NOT LEVEL BEHIND FINISHOLL</td>
<td>Wing not level with main frame</td>
<td>Adjust depth control on wing lift cylinders so that wings operate at same depth as frame.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lift cylinders out of phase. Raise Finisholl and hold hydraulic lever until all lift cylinders are completely extended. Extend wing fold cylinders to allow wings to flex over uneven ground.</td>
</tr>
<tr>
<td></td>
<td>Lift cylinders out of phase.</td>
<td>Raise Finisholl and hold hydraulic lever until all lift cylinders are completely extended.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Extend wing fold cylinders to allow wings to flex over uneven ground.</td>
</tr>
<tr>
<td></td>
<td>Finisholl not level front to back</td>
<td>Adjust radius rod to level unit. Thread nut completely onto leveling rod and lock with jam nut.</td>
</tr>
<tr>
<td></td>
<td>Discs running too deep</td>
<td>Adjust discs only deep enough to cut residue and level ridges.</td>
</tr>
<tr>
<td></td>
<td>Harrow not set correctly</td>
<td>COIL TINE HARROW - Adjust harrow teeth at more aggressive angle and/or increase spring pressure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPIKE TOOTH DRAG HARROW - Adjust harrow up or down until harrow runs flat.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPIKE TOOTH SPRING HARROW - Adjust angle of teeth for more aggressive action and/or increase spring pressure.</td>
</tr>
<tr>
<td></td>
<td>Unit does not stay level when discs are raised or lowered</td>
<td>Install optional hydraulic radius rod. See your Landoll dealer for details.</td>
</tr>
<tr>
<td>DISC GANG STOPS TURNING AND PLUGS</td>
<td>Discs set too shallow</td>
<td>Increase depth of disc gangs. Disc should run deep enough to cut residue.</td>
</tr>
<tr>
<td></td>
<td>Scraper set too tight</td>
<td>Adjust scrapers for less spring pressure. Scraper should apply only enough pressure to clean damp soil from discs.</td>
</tr>
<tr>
<td></td>
<td>Disc blade wear</td>
<td>Disc may be too small. New blades measure 20&quot;.</td>
</tr>
<tr>
<td></td>
<td>Disc blade concavity</td>
<td>Disc blades should have 1-5/16&quot; of concavity.</td>
</tr>
<tr>
<td>PROBLEM</td>
<td>PROBABLE CAUSE</td>
<td>SOLUTION</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SHANKS PLUG WITH RESIDUE</td>
<td>Disc set too shallow</td>
<td>Increase depth of disc gangs. Disc should run deep enough to cut residue.</td>
</tr>
<tr>
<td></td>
<td>Shanks not placed correctly</td>
<td>Check shank placement chart and adjust shanks as required.</td>
</tr>
<tr>
<td>DISC SCRAPER SPRINGS BEND</td>
<td>Soil build-up on disc blades</td>
<td>Scrapers are too loose to clean disc blades. Adjust scrapers tight enough to clean disc blades.</td>
</tr>
<tr>
<td></td>
<td>Scrapers not in full contact with disc</td>
<td>Loosen two bolts in scraper blades and rotate scraper forward or backward to get full contact between scraper and disc blade.</td>
</tr>
<tr>
<td>SHANK SPRINGS BREAKING</td>
<td>Spring pivot bolt too tight</td>
<td>Spring pivot bolt must be loose enough to allow spring plug to pivot so spring is not forced to bend.</td>
</tr>
<tr>
<td>WINGS FOLDING TOO FAST</td>
<td>Restrictor elbows not installed</td>
<td>Check to make sure restrictors are installed per assembly instructions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Idle tractor when folding.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turn tractor hydraulic flow down.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engage hydraulic valve. Hold fully engaged until folded.</td>
</tr>
</tbody>
</table>
Equipment from Landoll Corporation is built to exacting standards ensured by ISO 9001 registration at all Landoll manufacturing facilities.

Model 850/855 Series
Finisholl
Operator’s Manual

Re-Order Part Number F-133-0512

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