IMPORTANT
THE OPERATOR IS RESPONSIBLE FOR ADJUSTING THE MACHINE SINCE MACHINE DOES NOT COME “FIELD READY” FROM FACTORY.

CAUTION
READ & UNDERSTAND OPERATOR’S MANUAL BEFORE USING MACHINE.

See www.summersmfg.com for latest version of all Summers Operator’s Manuals.

SUMMERS MANUFACTURING CO., INC.
WEB SITE: www.summersmfg.com

MADDOCK, NORTH DAKOTA 58348 ........................................... (701) 438-2855
DEVILS LAKE, NORTH DAKOTA 58301................................. (701) 662-5391
Warranty

Summers warrants only products of its manufacture against operational failure caused by defective materials or workmanship which occur during normal use within 12 months from the date of purchase by the end user from Summers’ dealer.

Summers’ obligation is to replace free of charge any part of any product that Summers inspection shows to be defective excluding transportation charges to Maddock, ND or Devils Lake, ND and return and also excluding all transportation costs from Summers’ dealer to the dealer’s customer and all other costs such as removal and installation expense.

Summers shall not be liable for loss of time, manufacturing costs, labor, material, loss of profits, consequential damages, direct or indirect, because of defective products whether due to rights arising under the contract of sale or independently thereof, and whether or not such claim is based on contract, tort or warranty.

Written permission for any warranty claim return must be first obtained from authorized Summers’ personnel. All returns must be accompanied with a complete written explanation of claimed defects and the circumstances of operational failure.

Written warranty for all component parts used in the manufacture of Summers products is available upon request. Warranty of such component parts will be determined by said component manufacturer upon their inspection of the claimed defective part.

This express warranty is the sole warranty of Summers. There are no warranties, which extend beyond the warranty herein expressly set forth. The sales for products of Summers under any other warranty or guarantee express or implied is not authorized. This warranty voids all previous issues.

SUMMERS MANUFACTURING CO. INC.
MADDOCK, NORTH DAKOTA 58348
DEVILS LAKE, NORTH DAKOTA 58301
INTRODUCTION

This manual provides the following information about your Summers Land Roller.

SECTION CONTENTS
Section 1 – SAFETY explains important safety precautions and familiarizes the Operator with the decals and their locations.

Section 2 – ASSEMBLY includes step by step assembly instructions for your Summers Land Roller.

Section 3 – LAND ROLLER OPERATION provides necessary information for the operation and adjustment of the machine.

Section 4 – MAINTENANCE covers recommended mechanical maintenance. TROUBLESHOOTING provides a quick reference to solving problems. SPECIFICATIONS lists important dimensions, capacities and other technical information.

Section 5 – PARTS

OTHER ITEMS OF IMPORTANCE

A. Summers Mfg. Co., Inc. strongly recommends that each Land Roller Operator READ and UNDERSTAND the Operator’s Manual before using the machine. In addition, this Operator’s Manual should be REVIEWED at least ANNUALLY thereafter.

B. It is the policy of this company in improve its products whenever possible and practical to do so. We reserve the right to make changes or improvements in the design or construction of parts at any time without incurring obligations to install such changes on products previously delivered.

C. Reference to “right” and “left” in this manual is determined when machine is viewed from the rear.

D. Parts are referenced in each drawing with the Summers Manufacturing Part Number. Use this Part Number when ordering replacement parts from your Summers dealer. See back section of manual for description of each Part Number.

E. WARNING – DO NOT ATTEMPT to raise machine into transport position if mud has built up on rollers or if machine weight has been increased by any other means. Mechanical failure may occur.

F. Ability to safely operate the Summers Superroller is determined by both tractor horsepower and weight. The minimum tractor weight for operating this implement is 30,000 lb. Minimum tractor engine horsepower is 300. Dual tires or single tires set at maximum width are required for safe operation of Land Roller.

G. Never tow this implement with less than an 30,000 lb. vehicle. Tongue weight in transport and field positions is 1150 lbs.

H. NEVER ALLOW anyone to work under Land Roller.

OWNER REGISTER

| Name __________________________ |  Size __________________________ |
| Address ________________________ |  Serial Number ____________________ |
| City ___________________________ |  Date Purchased ____________________ (located by the hitch piece) |
| State/Prov. ____________________ |  Dealer _____________________________ |
| Mail Code ______________________ |  |
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SECTION 1 - SAFETY

SAFETY-ALERT SYMBOL

This symbol is used to denote possible danger and care should be taken to prevent bodily injury. This symbol means:

ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

Definition of each Signal Word used in conjunction with the Safety-Alert symbol.

**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

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

GENERAL SAFETY PRACTICES


2. **VERIFY** all safety devices and shields are in place before using machine.

3. **KEEP** hands, feet, hair and clothing away from moving parts.

4. **STOP** engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.

5. **BE CAREFUL** when working around high pressure hydraulic system.

6. **ALWAYS** make sure Land Roller is lowered into field position (cylinders retracted), it is blocked to prevent movement and that pressure is relieved from hydraulic circuits before servicing.

7. **DO NOT ALLOW RIDERS.**

8. **USE EXTREME CARE** when making adjustments.

9. **KEEP CHILDREN AWAY** from machinery at all times.

10. **NEVER ALLOW** anyone to work under Land Roller.

11. **WARNING – DO NOT ATTEMPT** to raise machine into transport position if mud has built up on rollers or if machine weight has been increased by any other means. Mechanical failure may occur.
SECTION 1 - SAFETY

SAFETY DURING TRANSPORT

1. Ability to safely operate the Summers Superroller is determined by both tractor horsepower and weight. The minimum tractor weight for operating this implement is 30,000 lbs. Minimum tractor engine horsepower is 300. Dual tires or single tires set at maximum width are required for safe operation of Land Roller.

2. ONLY TOW at a safe speed – 20 MPH MAXIMUM. Use caution when making corners and meeting traffic.

3. USE Safety Lights and Safety Chain between tractor drawbar and implement hitch when transporting on public roads.

4. ALWAYS install lift cylinder locks before transporting on public roads.

5. FOLLOW ALL local laws governing transporting of farm machinery.

6. Use additional caution and reduce speed when towing under adverse conditions, when turning and when on unlevel surfaces.

7. Frequently check for traffic from rear, especially during turns.

SAFETY DECALS

1. KEEP SAFETY DECALS CLEAN.

2. REPLACE missing or unreadable decals. New decals are available from your Summers dealer by ordering correct part number (PN) located on the decal.

DECALS AND THEIR LOCATIONS

1. PN 8Z0075 – DECAL FOR REMOVING TRANSPORT LOCKS

   WARNING
   REMOVE TRANSPORT LOCK(S) BEFORE LOWERING MACHINE. IF LOCK(S) DO NOT REMOVE FREELY, INSURE THAT CYLINDERS ARE COMPLETELY FILLED WITH HYDRAULIC FLUID AND ARE SUPPORTING THE LOAD TO BE LOWERED. 8Z0075

2. PN 8Z0079 – DECAL FOR COMPANY IDENTIFICATION

SUMMERS

MADDOCK, ND 58348

DEVILS LAKE, ND 58301
SECTION 1 - SAFETY

3. PN 8Z0087 – DECAL FOR PINCH POINT HAZARD

![DANGER DECAL]

FRAME PINCH POINT HAZARD
KEEP AWAY

To prevent serious injury or death from crushing:
• Stay away from frame hinge area when folding wings.
• Keep others away.
• Do not fold wings when bystanders are present.

4. PN 8Z0132 – SUPERROLLER ID DECAL

SUPERROLLER

5. PN 8Z0276 – DECAL FOR GENERAL CAUTION

![CAUTION DECAL]

1. Read and understand Operator’s Manual before using machine.
2. For Sprayers:
   a. Read and follow chemical manufacturers’ WARNINGS, instructions and procedures before using.
   b. Use recommended personal protective equipment to reduce or eliminate chemical contact.
   c. Never run pump dry.
3. Verify all safety devices and shields are in place before using machine.
4. Keep hands, feet, hair and clothing away from moving parts.
5. Stop engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.
6. Be careful when working around high pressure hydraulic system.
7. Do not allow riders.
8. Check all wheel bolts DAILY for tightness.
10. For Towed Implements; DO NOT EXCEED 20 MPH.
SECTION 1 - SAFETY

6. PN 8Z0800 – AMBER REFLECTOR

7. PN 8Z0805 – RED-ORANGE REFLECTOR

8. PN 8Z0810 – RED REFLECTOR

SAFETY LIGHT OPERATION

The Summers Safety Light Kit is equipped with a 7 pin connector which meets SAE J560 specification. To protect 7 pin connector, store in dust cap (8K8067) when not attached to towing vehicle.

On most towing vehicles WITHOUT brake lights:
Amber lights will turn on with flashers or turn signals.
Red lights will turn on with parking, road or field lights.

On most towing vehicles WITH brake lights:
Amber lights will turn on with flashers, turn signals OR when brake is applied.
Red lights will turn on with parking or road lights.
NOTE: DECALS ARE SYMMETRICAL WITH EXCEPTIONS OF 8Z0087, 8Z0276 AND 8Z0075.
SECTION 2 - ASSEMBLY

GENERAL ASSEMBLY SAFETY PRACTICES


2. If machine is to be assembled INDOORS, check that exit door is a MINIMUM OF 18’ WIDE and a MINIMUM of tractor height.

3. Reference to “RIGHT” and “LEFT” is determined when machine IS VIEWED FROM THE REAR.

4. Reference to “FORWARD” means TOWARDS THE TRACTOR.

5. Reference to “REAR” means AWAY FROM THE TRACTOR.

SAFETY-ALERT SYMBOL

This symbol is an alert to the potential for personal injury. This symbol means
ATTENTION! BECOME ALERT!
YOUR PERSONAL SAFETY IS INVOLVED!
GENERAL SAFETY PRACTICES

YOU ARE RESPONSIBLE for the safe assembly of the machine.

DO NOT ALLOW CHILDREN or other unauthorized persons within the assembly area.

WEAR PERSONAL PROTECTIVE EQUIPMENT which includes a hard hat, eye protection, work gloves and steel toed boots with slip resistant soles.

DO NOT MODIFY the equipment or substitute parts in any way. Unauthorized modification may impair the function and/or safety of the machine.

USE SUITABLE LIFTING DEVICE for components which could cause personal injury.

BLOCK UP ANY RAISED PART of the machine. Be sure machine is stable after blocking.

ALWAYS INSPECT LIFTING CHAINS AND SLINGS for damage or wear.

BE SURE LIFTING DEVICE IS RATED TO HANDLE THE WEIGHT.*

STOP ENGINE, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing or adjusting.

ALWAYS make sure Land Roller is lowered into field position (cylinders retracted), it is blocked to prevent movement and that pressure is relieved from hydraulic circuits before servicing.

USE EXTREME CARE when assembling, servicing or adjusting.

*APPROXIMATE WEIGHTS OF COMPONENTS

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<th>DESCRIPTION</th>
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<td>HITCH</td>
<td>1105</td>
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<tr>
<td>8P7120</td>
<td>CENTER SECTION</td>
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<tr>
<td>8P7102L &amp; R</td>
<td>SEC 1 WING (L &amp; R)</td>
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<tr>
<td>8P4215</td>
<td>ROLLER, 15’</td>
<td>4285</td>
</tr>
<tr>
<td>8P8662</td>
<td>PARTS BOX</td>
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Table for 62’ Landroller Components
Main Frame Roller Installation (Instructions for both 62’ & 84’)

(NOTE: 62’ shown in drawings)

MF1. Position 8P4215 on a flat even surface; block the roller to avoid unexpected movement.

**CAUTION:** The 15’ roller weighs 4285 lbs., use extreme care when moving rollers and frame components. **NOTE:** An H has been stamped onto one end of each roller. Position the center roller with the H to the left. All other rollers should have the H positioned to the center of the machine.

MF2. Use a fork lift or crane to position the main frame 8P7120 over the center drum and lower the frame so the roller axle stubs fit between the bearing hangers as shown in the Figure 1.

MF3. Install bearings with the **grease zerk toward the rear of the machine.** Secure to bolt plates with the hardware shown. Install reinforcement angles between the bottom attachment hole on the inside of the bolt plate, as shown in Figure 1.

MF4. Install snap rings on each roller shaft. Ensure that the roller is centered in the bearings and tighten the set screws.

MF5. Before removing the lifting device for the main frame, block the frame in the locations shown in Figure 1, also install blocks under the roller to keep it from rolling.

*Figure 1*
Hitch Installation

H1. Position hitch as shown in Figure 2; install the pins and hardware shown in Figure 2.

**IMPORTANT**

Always install the pins with the cross hole towards the outside. Pay attention to the orientation of the cross hole in the pin to the cross hole in the bushing on the main frame, only drive the pin in far enough to line up the holes, install the fasteners shown in Figure 2.

H2. Install the jack stand and pin.

H3. Install the hitch clevis and hardware shown on the front of the hitch.

H4. Install the Pivot lock and cylinder at the rear of the front hitch. Install the pins and washers as shown. Note the orientation of the pivot lock, do not install it backwards.
NOTE: DRUM OMITTED FROM THIS VIEW.
Main Frame Transport Frame Installation

T1. Loosely position 8T4100 on the main frame and affix the hardware associated with 8T4100. Do not tighten the fasteners. 8T4100 should always be positioned as shown, with the offset gap to the inside.

T2. Position the transport frame at the rear of the main frame, note the orientation of the cylinders clevis. Raise the transport frame so that pin 8T3640 can be driven into 8T4100. Note the orientation of the pin, the cross hole should be towards the outside of the machine. Secure the pin with hardware shown. Make sure the transport frame is centered and tighten all hardware from step T1.

T3. Attach the hydraulic cylinder to the main frame, with the hardware shown in the diagram. Note the number of washers on each side of the pin and the orientation of the cylinder ports.

T4. Insert the spindles into the spindle receiver on the transport frame. Secure with the hardware shown.

T5. Install the tires, torque the wheel nuts 170 ft-lbs.
HITCH AND DRUM OMITTED FOR CLEARER VIEW

Figure 3
Part 1 Wing Installation

The following instructions depict the left part 1 wing being installed on the machine. The right hand wing will follow the same procedure.

P1W 1. Install the cast knuckle, 8C1805. The orientation of the knuckle is extremely important. Installing the knuckle in the wrong orientation will not allow the wings to fold properly. Structural damage may occur if the knuckle is installed incorrectly and the machine is unfolded. Install the pins and hardware as shown.

**IMPORTANT**
The knuckle should be positioned as shown in Figure 4A. Verify the dimension to ensure that the knuckle is orientated correctly. One bore on the knuckle is offset from the center line as shown, the offset should always be towards the outside of the machine.

P1W 2. Position the left hand wing as shown over the knuckle. Install pin and hardware shown in Figure 4.

P1W 3. Install the small pin cylinder and pin as shown in Detail A of Figure 4. Install the roller pins. Note the orientation of the ports on the cylinder.

P1W 4. Raise the rear of the part 1 wing in the air high enough to allow the roller to be placed under the frame. **NOTE:** An H has been stamped onto one end of each roller. Position the center roller with the H to the left. All other rollers should have the H positioned to the center of the machine.

P1W 5. Install bearings with the grease zerk toward the rear of the machine (in field position). Secure to bolt plates with the hardware shown in Detail A of Figure 1. Install reinforcement angles between the bottom attachment hole on the inside of the bolt plate, as shown in Figure 4A.
SECTION 2 - ASSEMBLY

1. Install snap rings on each roller shaft. Ensure that the roller is centered in the bearings and tighten the set screws.

P1W6. Install the hubs on 8P6100 as shown in Detail C of Figure 4. Attach with the shown hardware and tighten.

P1W7. Install the tires to the hubs installed in the previous step. Tighten the wheel nuts to 170 ft-lbs. torque.

P1W8. Loosely position 8T4100 on the wing frame and affix the hardware associated with 8T4100. Do not tighten the fasteners.

P1W9. Position 8P6100 as shown in the diagram, making sure the assembly is centered to the clevis on wing frame. Install 8P3640 and secure with the hardware shown in the diagram.

P1W10. Install the hydraulic cylinder as shown. Install the pins and washers as shown in Detail B in Figure 4 on both the top and bottom of the cylinder.

Repeat the above steps for the Right hand side of the machine.

Part 2 Wing Installation.

P2W1. Position the left hand part 2 wing as shown. Install pin and hardware shown in Figure 5. Note the orientation of the pins, the cross hole should be towards the outside of the bushing.

P2W2. Raise the rear of the part 2 wing in the air high enough to allow the roller to be placed under the frame. **NOTE:** An H has been stamped onto one end of each roller. Position the center roller with the H to the left. All other rollers should have the H positioned to the center of the machine.

P2W3. Install bearings with the grease zerk toward the rear of the machine. Secure to bolt plates with the hardware shown in Detail B of Figure 5. Install reinforcement angles between the bottom attachment holes on the inside of the bolt plate, as shown in Detail B of Figure 5. Install snap rings on each roller shaft. Ensure that the roller is centered in the bearings and tighten the set screws.

P2W4. Install 8P7150LB as shown in the diagram, attach with the pins and hardware shown. Note the orientation of the pins.

P2W5. Install the hydraulic cylinder as shown. Install the pins and washers as shown in Detail A of Figure 5 on both the top and bottom of the cylinder.

Repeat the above steps for the right hand part two wing.
**Caster Installation**

*Note:* The caster wheel shown in Figure 6 is for the left hand side. The tire should be positioned towards the drum.

C1. Install 8P7190B as shown in the diagram, center 8P7190B on the caster wing. Attach with the hardware shown, tighten all nuts.

C2. Install 7P8530 into the caster weldment, attach the spindle with the hardware shown and tighten all fasteners.

C3. Install the assembled caster into the caster holder, be sure to install the wear plates and spacers in the correct order.

C4. Tighten the Caster Castle nut so the caster assembly cannot be turned by human force. Install the hardware in the castle nut as shown to ensure that it will not loosen.

C5. Install the castor pivot lock cylinder (8P0302) and all associated hardware as shown in the diagram. Make sure the cylinder ports are pointing towards the roller.

**Scraper Installation**

S1. Install scrapers as shown in drawing on page 2-14. Use the hardware shown in detail A.

S2. Adjust scraper so they do not touch the roller.
Hydraulic Installation

H1. Install Hydraulic components as shown in Figure 7 provided.
   A. Leave enough slack at all pivot points to allow folding machine without stretching or pinching hydraulic hoses.
   B. Secure hoses with nylon ties and clamps provided. Do not over tighten clamps.

H2. Install 8J5300 (one to each port) on front cylinder. Install 8J5700 to each end of tees. Attach 8N3312 (312” hoses) to bottom 8J5700 on each port of front cylinder and run forward to the hitch leaving enough slack in hose by cylinders for movement.

H3. Install 8N3432 (432” hose) to 8J6000 (90° fitting). Attach 8J6000 to 8J5300 on center port. Hydraulic Tees should be centered on machine as shown in Figure 7 - Detail F.

H4. Attach one end of 8N2088 (88” hose) to 8J5300 on center port and connect other end to 8J6010 on inside port of folding cylinder on first section of landroller. Attach one end of 8N0276 (276” hose) to 8J5300 on tee and connect other end to 8J6010 on outside port of folding cylinder of first section. (See Figure 7 - Detail C)

H5. Attach 8J5620 to both ports on center rear lift cylinder. Install 8C0650 (manifold) to each port according to Figure 7 - Detail A. Install 8J5500 on center port of top 8C0650 and all three ports of bottom 8C0650 (as shown in Figure 7 - Detail A).

H6. Install 8N3150 to 8J5700 on top port of front cylinder. Attach other end to center port of top 8C0650 (manifold). Install 8N3156 to 8J5700 on bottom port of front cylinder. Attach other end to center port of bottom 8C0650 (manifold). Run both hoses along frame as shown in Figure 7.

H7. Attach one each 8N3276 for 62’ (or 8N3312 for 84’) to each of the outside ports on both 8C0650 (manifold) as shown in Figure 7 - Detail A. Run hoses along frame as shown in Figure 7 toward lift cylinder on first section. Attach 8J5620 to each port on cylinders. Attach center port of 8J5700 (tee) to each 8J5620 on lift cylinder. Attach end of hose to one port of tee.

H8. Attach 8N3252 for 62’ (or 8N3276 for 84’) to other side of tee on section 1 lift cylinder. Run along frame as shown in Figure 7. Attach 8J6010 to each port on rear lift cylinder as shown in Figure 7 - Detail E. Attach other end of 8N3252 to each port of rear lift cylinder.

H9. Install two 8P6010 into each port on the pivot lock cylinder.
   62 Ft. LandRoller: Attach 8N3534 to each port of cylinder and route hose toward the front of the machine as shown in Figure 7.
   84 Ft. LandRoller: Attach 8N3136 to each port of cylinder and route hose towards the front of the machine as shown in Figure 7. Using 8J5100 attach the 8N3534 and continue running the hose towards the front of the machine.

   Attach 8J5300 to the end of the 8N3534 and join the hose from each side of the machine together with the tee. Attach 8N3432 to the remaining port and run the hose towards the front of the machine as shown.

   Install the adapter fitting and hydraulic tips as shown.

H9. Secure all hoses with hose hold downs and zip ties, leaving slack in hose near pivot points and cylinders.
SECTION 2 - ASSEMBLY

Diagram showing hydraulic connections and part numbers for various components.

Figure 7

- **A** Tractor to Center Frame Tees (Detail F) to Sec. 1 Cylinder (Detail D)
- **B** Center Frame Tee to Outside Port of Lock Cylinder (Detail C)
- **C** Center Frame Tee to Inside Port of Lock Cylinder (Detail C)
- **D** Center Frame Tee to Cylinder Block (Detail A)
- **E** Tractor to Cylinder Block (Detail A)
- **F** Center Frame Tee to Caster Lock Cylinder (Detail G)

Part Numbers:
- 8J6010 (4X)
- 8J6020 3/4-16ORB X #6JIC(M) 90° ADP
- 8J5000 3/4" X #6 JIC (F-SW)
- 8J5500 9/16" X #6 JIC(M)
- 8J5700 76° 2X
- 8J5800 3/4-16ORB X #6JIC(M) 90° ADP
- 8J5000 (4X)
- 8J6010 (4X)
- 8J5000 9/16" X #6 JIC(M)
- 8J5700 3/4" X #6 JIC(M) 90° ADP

For Base Side of Pivot Lock Cylinders Only:
- **H** Center Frame Tee to Caster Lock Cylinder (Detail G)

Connection Details:
- **A** 312° 2X
- **B** 150° 155°
- **C** 150° 155°
- **D** 312° 2X
- **E** 150° 155°
- **F** 76° 2X
- **G** 88° 2X

HYDRAULICS
8/2/2010 9LR6242.iam/8J5620 3/4" X #6 JIC (F-SW)
Figure 8 - Wiring and Safety Installation
LAND ROLLER OPERATION SAFETY


2. **VERIFY** all safety devices and shields are in place before using machine.

3. **KEEP** hands, feet, hair and clothing away from moving parts.

4. **STOP** engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.

5. **BE CAREFUL** when working around high pressure hydraulic system.

6. **ALWAYS** make sure Land Roller is lowered into field position (cylinders retracted), it is blocked to prevent movement and that pressure is relieved from hydraulic circuits **before servicing**.

7. **DO NOT ALLOW RIDERS**.

8. **USE EXTREME CARE** when making adjustments.

9. **KEEP CHILDREN AWAY** from machinery at all times.

10. **NEVER ALLOW** anyone to work under Land Roller.

11. **WARNING – DO NOT ATTEMPT** to raise machine into transport position if mud has built up on rollers or if machine weight has been increased by any other means. Mechanical failure may occur.

**STEPS PRIOR TO OPERATION:**

1. **COMPLETE WARRANTY REGISTRATION CARD.**
   
   A. Complete and return **WARRANTY REGISTRATION CARD** located at the beginning of this manual. Returning this card entitles you to a free gift.
   
   B. Complete the **OWNER REGISTER** also located at the beginning of this manual (Serial Number is located by the front of the hitch). Owner register information may be needed when ordering parts.

2. **VERIFY TRACTOR REQUIREMENTS.**
   
   A. **WARNING:** Land Roller must be attached directly to tractor drawbar and not an intermediate towed vehicle or implement. Loss of control could result causing serious injury or death to you or others.
   
   B. Ability to safely operate the Summers Land Roller is determined by both tractor horsepower and weight. The minimum tractor weight for operating this implement is 30,000 lbs. Minimum tractor engine horsepower is 300. Dual tires or single tires set at maximum width are required for safe operation of the Land Roller.
   
   C. The Summers Land Roller must be connected to a tractor drawbar with a locked draw pin. The tractor drawbar must be able to withstand 1150 lb. of tongue weight during transport and field operation.
INITIAL HOOKUP:

1. Make tractor to hitch connection with locking draw pin and safety chain.
2. Retract jack and rotate into storage position.
3. Plug Lockpin Cylinder hoses into desired tractor outlet, adjust hydraulic flow rate to 35% of maximum. Insure that tips and couplers are CLEAN.
4. Plug Lift Cylinder hoses into desired tractor outlet, adjust hydraulic flow rate to 35% of maximum.
5. Plug Pivot Lock Cylinder hoses into desired tractor outlet, adjust hydraulic flow rate to 35% of maximum.
6. Connect safety Light Kit wiring harness to 7 pin receptacle.
7. If Land Roller is in Transport Position, follow “Steps Required to Unfold from Transport to Field Position”.
8. INITIAL CHECK – with machine in Field Position
   A. After receiving or assembling your Land Roller, it is a good practice to double check the entire machine so all fasteners are securely tightened.
   B. Make sure all grease fittings are in place and greased properly.
   C. Inflate tires to recommended inflation pressure (see page 4-2), check that wheel nuts are tightened to 170 ft-lb and check that wheel bearings are correctly adjusted.
SECTION 3 – OPERATION

STEPS REQUIRED TO UNFOLD FROM TRANSPORT TO FIELD POSITION:

1. **WARNING:** Land Roller must be attached directly to tractor drawbar and not an intermediate towed vehicle or implement. Loss of control could result causing serious injury or death to you or others. Never tow this implement with less than an 30,000 lb. vehicle.

2. Ability to safely operate the Summers Land Roller is determined by both tractor horsepower and weight. The minimum tractor weight for operating this implement is 30,000 lb. Minimum tractor engine horsepower is 300. Dual tires or single tires set at maximum width are required for safe operation of the Land Roller.

3. The Summers Land Roller must be connected to a tractor drawbar with a locked draw pin. The tractor drawbar must be able to withstand 1150 lb of tongue weight during transport and field operation.

4. Park tractor and Land Roller on a firm level surface with enough open area that will allow unfolding Land Roller without contacting obstructions.

5. Remove all cylinder locks and store in the provided storage locations.

6. Make sure the Landroller is following straight behind the tractor. Pull into the field straight and far enough to back up the Land Roller without hitting any obstructions.

7. Fully retract the pivot lock cylinders. **The caster wheel will not pivot if the pivot lock cylinder is extended. Machine damage may occur if care is not taken to make sure the locks have been retracted. Damage is not covered under warranty.**

8. Back machine up slowly, maneuvering it so wings open evenly. If wings do not open evenly pull ahead and try again. The caster wheels are designed to pivot in the direction that wing needs to travel to open up. Once the caster wheels have pivoted the open process should go smoothly.

9. Once the wings have opened up, continue backing until the wings are fully engaged in the wing guides. If the wings are not opening up equally they will not engage the wing guides at the same time. Pull ahead and make adjustments so both wings enter the wing guides at the same time.

10. Fully extend the lock pin cylinders.

11. Lower the machine to the ground, continue retracting the cylinders until all cylinders are fully retracted.
SECTION 3 – OPERATION

LAND ROLLER FIELD OPERATION:

1. Choose an operating speed which achieves desired results. Operating at over 7 MPH will decrease effectiveness and increase chance of immovable rocks denting roller tube. Denting of roller tube is NOT covered by warranty.

2. Slow down for turns. Because of the weight of the roller turning at high speeds may cause the tractor to “fish tail”. Control will be more easily maintained at slow rates of turns.

STEPS REQUIRED TO FOLD FROM FIELD TO TRANSPORT POSITION:

1. WARNING: Land Roller must be attached directly to tractor drawbar and not an intermediate towed vehicle or implement. Loss of control could result causing serious injury or death to you or others. Never tow this implement with less than an 30,000 lb vehicle.

2. The Summers Land Roller must be connected to a tractor drawbar with a locked draw pin. The tractor drawbar must be able to withstand 1150 lb of tongue weight during transport and field operation.

3. WARNING: DO NOT ATTEMPT to raise machine into transport position if mud has built up on rollers or if machine weight has been increased by any other means.

4. Activate the wing lock cylinders valve and fully retract the wing lock cylinders.

5. Raise the machine into transport position. Make sure all cylinders have fully extended.

6. Install cylinder safety locks.

ROAD OPERATION:

1. Pivot Lock Cylinder must be used to avoid damage to the machine.

2. Note position of nut when Pivot Lock Cylinder is extended. This can be observed from the operating station.
TRANSPORTING LAND ROLLER:
1. If Land Roller is in Field Position, follow “Steps Required to Fold Land Roller from Field to Transport Position”, page 3-4.

2. Ability to safely operate the Summers Superroller is determined by both tractor horsepower and weight. The minimum tractor weight for operating this implement is 30,000 lbs. Minimum tractor engine horsepower is 300. Dual tires or single tires set at maximum width are required for safe operation of Land Roller.

3. ONLY TOW at a safe speed – 20 MPH MAXIMUM. Use caution when making corners or meeting traffic.

4. USE Safety Lights and Safety Chain between tractor drawbar and implement hitch when transporting on public roads.

5. ALWAYS install lift cylinder locks.

6. FOLLOW ALL local laws governing transporting of farm machinery.

7. Use additional caution and reduce speed when towing under adverse conditions, when turning and when on unlevel surfaces.

8. Stay clear of overhead lines and other overhead obstructions.

9. Frequently check for traffic from rear, especially during turns.

CASTER WHEEL PIVOT LOCK
OPERATION & ADJUSTMENT:
The caster wheel pivot lock has been designed to provide tension to the caster wheel assembly. This tension will help to provide stability to the caster wheel at transport speed. When transporting the machine the pivot lock cylinder should be extended when traveling in a straight forward direction.

When turning the machine around corners or into fields the pivot lock cylinders should be retracted to allow the caster wheel to rotate. The pivot lock cylinders should be extended as soon as the turn is completed and before speed is increased.

The pivot lock cylinders will require periodic adjustment. With the pivot lock cylinder retracted, adjust the lock pin so it is 1/8” inside the lock collar as shown.

Failure to comply with the above recommendations can result in damage to the machine which will not be covered under warranty.
SECTION 3 – OPERATION

UNHOOKING LAND ROLLER FROM TRACTOR IN FIELD POSITION:
1. NEVER unhook Land Roller if positioned between Field and Transport Position.

2. Choose a firm level surface.

3. With Land Roller in Field Position; shut off tractor, engage parking brake and relieve hydraulic pressure by cycling remote lever.

4. Block rollers to prevent movement after hitch pin is removed.

5. Check that hitch pin is not bound with sideways or front to back pressure. If hitch pin is not free, carefully reposition tractor.

6. Rotate jack into vertical position and extend jack until hitch piece lifts off tractor drawbar.

7. Disconnect wiring harness, hydraulic hoses and safety chain.

8. Recheck that hitch pin is free, if so, stand to the side of the hitch and remove hitch pin.


UNHOOKING LAND ROLLER FROM TRACTOR IN TRANSPORT POSITION:
1. NEVER unhook Land Roller if positioned between Field and Transport Position.

2. DO NOT ALLOW ANYONE TO WORK UNDER LAND ROLLER.

3. Choose a very firm level surface.

4. Block tires to prevent movement after hitch pin is removed.

5. Check that hitch pin is not bound with sideways or front to back pressure. If hitch pin is not free, carefully reposition tractor.

6. Rotate jack into vertical position, place sturdy block under jack to distribute load over larger area and extend jack until hitch piece just lifts off tractor drawbar.

7. Disconnect wiring harness, hydraulic hoses and safety chain.

8. Recheck that hitch pin is free, if so, stand to the side of the hitch and remove hitch pin.

MAINTENANCE SAFETY
1. STOP engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting or maintaining.
2. BE CAREFUL when working around high pressure hydraulic system.
3. ALWAYS make sure that Land Roller is lowered into field position, it is blocked to prevent movement and pressure is relieved from hydraulic circuits before servicing.
4. USE EXTREME CARE when making adjustments.
5. KEEP CHILDREN AWAY from machinery at all times.
6. NEVER ALLOW anyone to work under Land Roller.

MAINTENANCE FOR AFTER THE FIRST FOUR HOURS OF OPERATION
1. Grease wing and hitch pivots.
2. Check all hydraulic components for leaks. (SEE HIGH-PRESSURE FLUID WARNING ABOVE.)
3. Check tightness of wheel nuts. Recommended torque 170 ft. lbs.
4. Check tightness of wheel bearings.
5. Check tightness of all hardware. Pay special attention to hitch and pivot pin retaining bolts.
6. Check tire pressures. Recommended air pressure is 90 PSI.

DAILY MAINTENANCE
1. Grease wing and hitch pivots.
2. Check all hydraulic components for leaks. (SEE HIGH-PRESSURE FLUID WARNING ABOVE.)
3. Check tightness of all wheel nuts. Recommended torque 170 ft. lbs.
4. Check tire air pressure. Recommended air pressure is 90 PSI.

BALL BEARINGS ON ROLLERS: To maximize bearing life, grease bearings at mid day or end of day when bearings are at operating temperature. **Every 20 hours:** Add three strokes (approx. .14 oz.) of grease.

CASTER MAINTENANCE: Castle nut on the caster needs to be checked daily for tightness using the following procedure: Tighten the Caster Castle nut so the caster assembly cannot be turned by human force. Install the hardware in the castle nut as shown to ensure that it will not loosen.
SECTION 4 – MAINTENANCE

PERIODIC MAINTENANCE
Caster Wheel Pivot Lock Adjustment
The pivot lock cylinders will require periodic adjustment. With the pivot lock cylinder retracted, adjust the lock pin so it is 1/8” inside the lock collar as shown on Page 3-5.

Grease all zerks shown in the diagram daily.

Check tightness of castle nuts and all component of the caster wheel.

1. Repack wheel bearings and check tightness.
2. Check the tightness of all hardware. Pay special attention to hitch and pivot pin retaining bolts.
3. Check Land Roller for damaged or worn parts. Replace as needed.

STORAGE
1. Follow steps outlined in “UNHOOKING LAND ROLLER FROM TRACTOR IN FIELD POSITION”.
2. Clean and remove all excessive dirt and grease from Land Roller.
3. Grease all zerks.
4. To prevent rusting, repaint any areas that have been worn, chipped or scratched.
5. Apply grease* to any exposed part of cylinder shafts.

*NOTE: Before returning Land Roller into service, all grease must be removed from cylinder shafts to prevent damage to seals.

SPECIFICATIONS

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<td>45 ft.-lbs., loosen until first slot is aligned with hole in axle, install cotter pin, bend to retain.</td>
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OWNER REGISTER INFORMATION, LOCATED AT THE BEGINNING OF THIS MANUAL, MAY BE NEEDED WHEN ORDERING PARTS (SERIAL NUMBER IS LOCATED BY THE FRONT OF THE HITCH).
AFTER DRUM IS INSTALLED PLACE STANDS AT THE 4 LOCATIONS SHOWN TO STABILIZE FRAME.

8X0265 3/4" LN
8X0306 3/4" LW
8R8005
8P4203 (36" DIA.)
8P4215 (42" DIA.)

3/4" X 2-1/2"
3/4" LN
3/4" LW
(42" DIA.)
NOTE: DRUM OMITTED FROM THIS VIEW.
**HUB AND AXLE COMPONENTS**

**Assembly Notes:**

A. Before towing machine, pack wheel bearings and fill 1/2 of hub cavity with high quality bearing grease.

B. Tighten axle nut to 45 ft.-lbs, loosen nut until first slot is aligned with hole in axle, install cotter pin and bend to retain.

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**Legend:**

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*Pre 2000**

**GBGI (Not Shown), 8R6921 Triple Lip (Shown)**

***Pre 2006 8K7120 (SE17)**
**SECTION 5 – PARTS**

**A**
- CENTER REAR LIFT CYLINDER - HYD. BLOCK
- TO REAR CASTER LOCK CYLINDERS (H HOSES)
- TO RIGHT SIDE WING LOCK CYLINDER (F & G HOSES)
- FROM TRACTOR (432" HOSES)

**B**
- 3/4" X #6 JIC (F-SW)
- 9/16" X #6 JIC (M)

**C**
- TO LEFT SIDE WING LOCK CYLINDER (F & G HOSES)

**D**
- TRACTOR TO FRONT LIFT CYLINDER (DETAIL B)
- 3/4" X #6 JIC (F-SW)
- 9/16" X #6 JIC (M)

**E**
- 3/4" X #6 JIC (F-SW)
- 9/16" X #6 JIC (M)

**F**
- 76" 2X
- 88" 2X

**G**
- CENTER FRAME TEE TO OUTSIDE PORT OF LOCK CYL. (DETAIL C)

**H**
- CENTER FRAME TEE TO CASTOR LOCK CYL. (DETAIL G)

**HOSE CIRCUIT DESCRIPT.**

<table>
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<tr>
<th>HOSE</th>
<th>CIRCUIT DESCRIPT</th>
<th>62 PART NUMBER</th>
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<tr>
<td>A</td>
<td>TRACTOR TO CENTER FRAME TEE (DETAIL F)</td>
<td>8J25510 (2X)</td>
<td>8N3432 (4X)</td>
<td>HHOSE525510</td>
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<td>B</td>
<td>HYD. BLOCK (HHOSE525510) TO SEC. 1 CYL. (DETAIL D)</td>
<td>8J25620 (2X)</td>
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<td>SEC. 1 CYL. (8J25620) TO SEC. 2 CYL. (8J25500) (DETAIL E)</td>
<td>8J25500 (2X)</td>
<td>8N3312 (2X)</td>
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<td>TRACTOR TO FRONT LIFT CYLINDER (DETAIL B)</td>
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<td>8N3252 (2X)</td>
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<td>E</td>
<td>FRONT LIFT CYL. TO CENTER PORT OF BLOCK (HINDUDETAI A)</td>
<td>8J25310 &amp; 8N3110 (1X)</td>
<td>8N3312 (1X)</td>
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<td>F</td>
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<td>CENTER FRAME TEE TO INSIDE PORT OF LOCK CYL (DETAIL C)</td>
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<td>8N3432 (4X)</td>
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<td>CENTER FRAME TEE TO CASTOR LOCK CYL. (DETAIL G)</td>
<td>8J2534 (4X)</td>
<td>8N3432 (4X)</td>
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**FOR BASE SIDE OF PIVOT LOCK CYLINDERS ONLY**

- 3/4" ORB TIP ISO
- 3/4" ORB TIP ISO

**DETAIL G**

**DETAIL D**

**DETAIL F**

**DETAIL A**

**DETAIL B**

**DETAIL C**

**DETAIL E**

**DETAIL F**

**DETAIL G**

**DETAIL H**

**DETAIL A**

**DETAIL B**

**DETAIL C**

**DETAIL D**

**DETAIL E**

**DETAIL F**

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**DETAIL E**

**DETAIL F**

**DETAIL G**

**DETAIL H**

**DETAIL A**

**DETAIL B**

**DETAIL C**

**DETAIL D**

**DET
1. If Roller Shaft is not tapped, weld ½”-20 UNF nut at center of left pivot shaft of middle roller. Position external taper of nut toward shaft. Insure that threads are not damaged by weld heat or spatter. Allow weld to cool.

2. Attach Acre Meter with ½” lock washer. Tighten to 260-390 in-lbs.

* For accurate logging of acres, it is important that meter is mounted concentrically on roller shaft.

* Do not use chemical agents such as thinner, solvents or mineral spirits to clean Acre Meter cover.

* Do not attempt to open meter! Attempting to do so can cause injury and may destroy Acre Meter.

**CONVERSION FACTOR**

Note: Meter reading must be multiplied by conversion factor for actual acres.

**MACHINE WIDTH**  **FORMULA**

- 30’  READING x 2.7 = ACRES
- 41’  READING x 3.6 = ACRES
- 45’  READING x 4 = ACRES
- 46’  READING x 4.1 = ACRES
- 50’ (36”)  READING x 3.8 = ACRES
- 53’  READING x 4.7 = ACRES
- 62’  READING x 5.5 = ACRES
- 84’ (36”)  READING x 6.5 = ACRES
- 84’ (42”)  READING x 7.5 = ACRES
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<td>NYLON TIE .18 X 11&quot;</td>
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<td>HYD CYLINDER 4&quot; X 32&quot;</td>
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<td>U-BOLT 3/8 X 4 X 7-3/4&quot; SQ</td>
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<td>ROLL PIN 1/4 X 2&quot; YLW ZNC</td>
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<td>#10 JIC(F) X #6 JIC(M) HEX BUSH</td>
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<td>TIRE 12.5L X 15&quot; LRF TL HWYSRV</td>
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<td>12.5L X 15&quot; LRF ON 8 BLT WHEEL</td>
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<td>HUB HD812 W/CUPS&amp;ZKRK 8BLT3LIP</td>
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<td>BEARING INNER HD812 LM3780</td>
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<td>BEARING OUTER HD812 LM2790</td>
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1965 – Summers Manufacturing is founded by Harley Summers, who purchases patent rights for Goebel truck and pickup hoists from the Goebel Brothers of Lehr, ND. These hoists, produced in Harley Summers’ blacksmith shop the first year, were distributed nationwide by a Cincinnati, Ohio, dealer. With increasing sales, the company soon outgrows the small shop. Summers wins the Herman harrow contract, beginning the company’s Herman culti-harrow line. Summers builds a 7,200 square-foot factory in Maddock to meet the demand for truck and pickup hoists, as well as Herman harrows.

1969 – Firm incorporates and becomes officially known as Summers Manufacturing Company, Inc.

1970 – Summers purchases rights to manufacture/market the Herman Harrow.

1973 – Company builds new 20,000 square-foot plant and offices in Maddock, adding a 20,000 square-foot assembly plant in the fall of 1975 (completed in January 1976), bringing total square footage of Maddock factories to 47,000.

1977 – Summers introduces the Agri-sprayer, used in conjunction with the Herman culti-harrow to incorporate herbicides and liquid fertilizer.

1980 – Company purchases manufacturing and distributing rights to Crown rockpickers from Crown Manufacturers of Regina, Saskatchewan. This forces another expansion project – a 26,000 square foot factory on a 24 acre site in Devils Lake, ND Industrial Park.

1981 – Company establishes a branch facility in Regina, Saskatchewan.

1982 – Devils Lake plant begins operations in January, manufacturing supersprayers and rockpickers. The Maddock factory begins producing the Superweeder, a combination cultivator and harrow.

1983 – Summers buys manufacturing and distributing rights to the Fargo Field Sprayer line from Mid America Steel (formerly Fargo Foundry), Fargo. This field sprayer line is manufactured at the Devils Lake plant. Harley Summers is selected North Dakota’s small-businessman of the year by the Small Business Administration.

1984 – Herman Diamond Disk, a disk harrow made in a diamond shape to reduce blade breakage from rocks, comes off the assembly line.

1985 – Summers signs a contract with Melroe Company of Bismarck to obtain exclusive manufacturing rights to the Melroe harrow line.

1989 – Summers purchases TorMaster Company of Hordean, Manitoba, giving the company a line of rolling packer equipment, comprised of harrow packers and hydraulic fold coil packers.

1992 – A new engineering office/parts department is added to the Devils Lake factory.

1993 – Company adds two new products: a pickup-mounted sprayer with booms of 80 and 90 feet, and the Summers Superharrow, an extra-heavy-duty residue-management tool designed for the minimum and no-till farmer.

1994 – a 50 by 125 foot addition to the Maddock factory is completed. Construction begins on a 24,576 square-foot addition to the Devils Lake factory, which enables the company to increase production of truck-mounted and pull-type supersprayers and rockpickers.

1995 – 1500 square foot office area added to the Maddock plant. Company introduces Chisel Plow with floating hitch and 700# trip assembly.

1997 – 16,800 square foot warehouse in Maddock purchased from local business.

1999 – Company introduces the Ultimate suspended boom trailer sprayer with hydraulic folding booms. Additional sizes added to the Chisel Plow line, now ranging from 28’ to 54’.

2000 – Company introduces the Superweeder, a combination cultivator and harrow.

2001 - Cold storage building completed at Devils Lake. Company extends boom lengths up to 110 feet on the Ultimate Supersprayer.

2002 - Company adds a warehouse and service man in Aberdeen, SD.

2003 - Company introduces the Ultimate NT Supersprayer featuring a bolt on axle for easier adjustment, and a new family of tanks that feature a drainable sump and a common width dimension.

2004 - A 124 ft. x 310 ft. addition is added onto the current Devils Lake plant.

2005 - The Summers Superchanger is added to the “Field Tested Tough” product line. Additional sizes of 56’, 58’ and 60’ are added to the Superchisel line. Ultimate-Ultra NT Supersprayer introduced featuring 120’ & 133’ booms.

2006 - The Summers Coulter-Chisel, Rolling Choppers and 30’ Superroller were included in product line.

2007 - 62’ & 84’ 5 Section Landrollers and a 20’ Coulter-Chisel were introduced.

2008 - Disk-Chisels, ranging from 16’ to 40’ widths, are added to product line.


2010 – Rolling Basket and 47’ Diamond Disk added to product line. A 124 ft. x 310 ft. addition to Devils Lake factory built for a state of the art paint system.

2011 – Additional Supercoultersized were added along with larger tires for tillage implements. Ultimate and Ultra Supersprayers received an additional tank size of 1650 gallons. Front Caster Wheel option was made available for chisel implements.

2012 – 41’, 46’ & 53’ Trail Type Landroller added to product line. Additional Superchisel sizes of 16’ & 20’ were added.

Summers distributes on a wholesale level to dealers and distributors throughout markets in North Dakota, South Dakota, Minnesota, Montana, Iowa, Washington, Idaho, Oregon, Utah, Colorado, Kansas, Nebraska, Oklahoma, Texas, Manitoba, Saskatchewan, Alberta, British Columbia, Kazakhstan, Russia and Australia, making it an international company.