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TO YOU, THE OWNER

Your Dalton Ag Equipment is the most modern, up-to-date, versatile, machine available for fertilizer application. The machine is the result of many years of experience, research, development and testing of equipment for fertilizer application. It is soundly engineered and carefully built to rigid specifications. It is of rugged and simple construction, with a minimum of moving parts.

However, to obtain maximum performance from your Dalton Ag Equipment, it is necessary to follow the instructions and safety suggestions in this manual. Each section has been carefully prepared for the purpose of providing needed and valuable information to the owner and operator. Each operator of this unit should be familiar with the contents of this manual. Keep it in a safe and convenient location. THERE ARE MANY SAFETY SUGGESTIONS (CAUTION AREAS) PRINTED THROUGHOUT THIS MANUAL. CAREFULLY READ THEM ALL BEFORE OPERATING THIS UNIT.

DESIGN IMPROVEMENTS

Dalton Ag Products follows a policy of continuous products improvement. We therefore reserve the right to make design improvements, and changes in specifications and prices, without incurring obligations to make revisions or additions to equipment previously sold.

REGISTER WARRANTY ONE OF FOUR WAYS

- Register on-line at: www.daltonag.com
- Fax your completed warranty registration form to: 641-333-4429
- Email your completed warranty registration form to: office@daltonag.com
- Mail your completed warranty registration form to: Dalton Ag, Inc. P.O. Box 70 Lenox, IA 50851
LIMITED WARRANTY STATEMENT

DALTON AG, INC. warrants to the original purchaser only that all products manufactured under the Dalton Ag and Mobility Brands will be free from defects in material and workmanship under normal use and service.

DALTON AG’s obligation under this warranty is limited to repairing or replacing, as it may elect, free of charge and without charge for installation, at the place of business of a dealer or distributor authorized to handle the equipment covered by this warranty or at a DALTON AG facility, any parts that prove, in DALTON AG's judgment, to be defective in material or workmanship within two (2) years after delivery to the original purchaser. DALTON AG shall not be liable for personal injuries or any special or consequential damages of any kind, either direct or indirect. This warranty is subject to acts of God, fire and existing conditions of supply and demand, production, ability or inability to deliver, or for any other valid reason beyond the reasonable control of DALTON AG. No distributor, dealer, agent or DALTON AG employee (other than DALTON'S President in writing) is authorized to extend or make any other or further express or implied warranty or incur any additional obligation on DALTON AG’s behalf in connection with the sale of this product.

Customer Responsibility
Product Registration - It is a condition of this warranty that the original purchaser fill out the warranty card furnished by DALTON AG and return it to DALTON AG to be recorded in DALTON AG’s owner file. Registration may also be done on line at www.DaltonAg.com/warrantyregistration. If the original purchaser's card or electronic registration is not on file at DALTON AG’s office, the warranty period will extend only from date equipment was picked up or shipped from the DALTON AG plant.

Maintenance - It is the customer’s responsibility to maintain their equipment in accordance with the instructions provided in the Operator’s Manual. DALTON AG recommends that you keep records and receipts as the customer may be required to verify the maintenance instructions have been followed.

Operation – It is the customer’s responsibility to operate the equipment only for the purpose for which it was designed and in accordance with all safety and operational recommendations contained in the Operator's Manual. If a defect in materials or workmanship occurs, it is the customer’s responsibility to cease operating the equipment until authorized repairs are made.

Damage incurred from continued operation after a defect is discovered may not be covered by this warranty.

What this Warranty Covers
This warranty covers failures caused by defects in materials or workmanship only.

This Warranty does not cover failures caused by:

- Improper operation
- Unauthorized repairs
- Natural calamities
- Use of Non DALTON AG parts
- Unauthorized modifications
- Neglected maintenance
- Usage contrary to the intended purpose of the product

This Warranty does not cover replacement of Wear or Maintenance Items including, but not limited to:

- Lubricants
- Hoses
- Disks
- Idlers
- Filters
- Tires
- Chains
- Blades
- Tires
- Belts
- Chains
- Bearings

This Warranty does not cover:
- Pickup and delivery of the equipment
- Service Calls or Travel Time to and from sites
- Rental of replacement equipment during repair period
- Products that have been declared a total loss and subsequently salvaged
- Overtime labor charges

Parts Warranty
DALTON AG warrants its replacement parts against defects in materials or workmanship for a period of 90 days or the remainder of the product warranty, whichever is longer under the terms set out above. Remedy for defective replacement parts for units that are beyond the original product warranty, will be limited to replacement of the failed part.
NEW MACHINE CHECKOUT

1. All hardware properly tightened.
2. Lubrication of grease fittings.
3. Wheel bolts tightened to proper specs.
4. Check hydraulic hoses and fittings.

MAINTENANCE

1. Visually inspect machine daily.
2. Repair or replace any worn or damaged parts.

LUBRICATION SCHEDULE

Careful observance of the following lubrication schedule is the best preventative maintenance program for your Dalton Ag Equipment. We recommend that you establish a firm program to insure lubrication in strict compliance with the following schedule. Use only good grade pressure gun type grease unless otherwise specified.

Daily Lubrication
Hinge points

Weekly Lubrication
Wheel bearings
Coulters

Annual Lubrication
Check all bearings - repack or replace as needed
IMPLEMENT SAFETY

In addition to design and configuration of equipment, safety and accident prevention are dependent upon the awareness, concern, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment. Failing to follow these safety messages can result in machine damage, personal injury, and/or death.

- Before operating your applicator, thoroughly read and understand your operator’s manual. If you do not understand any portion of the operator’s manual, contact your local Dalton Ag dealer immediately for clarification.

- Furnish this manual to a new operator.

- Tow with tractor only. Never transport applicator unit in excess of 20 MPH. Maintain a safe speed.

- Use a Slow-Moving-Vehicle (SMV) emblem when transporting.

- Be sure safety decals are readable. All safety related decals must be replaced if the applicator is painted or the decals are otherwise rendered unreadable.

- Install transport link before transporting.

- Always check for overhead obstacles in transporting applicator and before folding or unfolding the wings of the unit.

- Never permit riders on the applicator or tractor.

- Proceed slowly on rough or slippery roadways, on side hills, and around curves to avoid tipping.

- Reduce speed when approaching ditches and corners. Do not make sharp turns with brakes.

- Machinery should be operated only by persons familiar to the tractor, applicator unit, and the safety related items.

- Do not stand on, or straddle tongue when unhitching.

- Do not modify or permit anyone to modify this applicator and any of its components without first consulting your Dalton Ag dealer.

- Do not lubricate, adjust, or repair when applicator unit is in motion.

- Use only approved replacement parts.

- To prevent serious injury from high pressure fluid, NEVER attempt to inspect, service, or disassemble any part of the hydraulic system until all pressure is relieved by lowering the toolbar to the ground (or secure with cylinder transport stops provided).

- High-pressure fluid is nearly invisible but has enough force to penetrate the skin. Never use the hands to search out a suspected leak. If injured by escaping fluid, obtain medical attention at once to minimize chance of infection. Wear safety glasses or goggles to avoid eye injury when working on the hydraulic system.

- Always check torque on wheel bolts before transporting.
PRE-SEASON CHECK

1. Carefully review the safety suggestions in this manual.

2. Check all bolts for proper tightness. When the implement is new, check after one hour and every few hours of operation.

3. Replace ground tools that are severely worn, broken or damaged.

4. Check tires for proper inflation. All tires should be inflated equally to avoid side draft.

5. Check the wheel lug bolts daily, keep wheel bolts tight.

6. Grease all fittings.

7. Inspect, repack, or replace (if necessary) wheel bearings and seals.

8. Check hoses, hose routing and hydraulic cylinders. Any indication of leakage or fraying of hoses should be corrected.

OFF-SEASON STORAGE

Following these suggestions will extend service life and satisfaction:

1. A little time and effort spent cleaning your machine before storing will repay in longer service, easier operation and higher resale value.

2. Inspect for worn or damaged parts. Replace, if required, and avoid delays the next season.

3. Repaint all areas where the original paint is worn off.

4. Lubricate your implement.

5. Grease all exposed metal surfaces of ground tools.

6. Store the unit inside a shed to protect from weather and on a level area with wings down. The ground working parts should rest on boards.

7. Disconnect the rod end of the lift cylinders and retract the rod into the cylinder to prevent the cylinder rod from rusting.

8. Cap or plug all hydraulic oil lines, if the cylinders are removed. This is to prevent any contaminants from entering the hydraulic system.

9. Raise tires off ground or remove and store in cool dry location out of sunlight.
IMPORTANT: Over tightening hardware can be as damaging as under tightening. Tightening beyond recommended torque will reduce the fastener’s shock load capacity.

### BOLT TORQUE CHART

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ITEMS WITH * = INCH POUNDS
ALL OTHERS = FOOT POUNDS

WARNING: Never work around any raised implement while in the raised position without using safety lockups.
## LOADED RADIUS OF VARIOUS TIRES - FOR USE IN SETTING JOHN BLUE GROUND-DRIVEN PUMPS

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LIQUID INJECTOR NOZZLE CHART

NOZZLE SELECTION

1. To select the proper nozzle size, first determine the gallons per acre and speed that is going to be used. Go to the table for the proper row spacing.

2. Find the speed across the top, go down to the “Gallon Per Acre” and read the nozzle size in the box.

3. Order nozzle by m.p.h. and gallons per acre.

FORMULA TO CONVERT POUNDS PER ACRE TO GALLONS PER ACRE

\[
\text{Pounds per Acre/Percent of Nitrogen} = \frac{\text{Total Pounds per Acre}}{\text{pounds per Gallon}} = \text{Gallons per Acre}
\]

EXAMPLE: 100 (# per Acre) / .28 (28%) = 357 (# per Acre) / 10.65 (# per Gallon) = 33.5 (GPA)

NOTE: If 1/2 rate is needed on outside shanks, order two nozzles with half the capacity. If 1 1/2 rate is needed on outside shanks, order two nozzles with 1 1/2 times the capacity.

***REFER TO THE FOLLOWING RATE CHART FOR TIPS AND APPLICATION***
<table>
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<th>TIP NUMBER</th>
<th>ORIFICE DIAM.</th>
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**** 15” ROW CONVERSION - X 2
**** 36” ROW CONVERSION - X .83
To determine the orifice plates you need, use the following equations:

\[
\text{GPM} = \frac{\text{GPA} \times \text{MPH} \times W}{5,940}
\]

\[
\text{W} = \text{Nozzle spacing (in inches)}
\]

\[
\text{W} = \text{Spray width (in inches) for broadcast spraying.}
\]

\[
\text{W} = \frac{\text{Row spacing (in inches) divided by the number of nozzles per row}}{\text{for directed spraying.}}
\]

\[
\text{GPA} = \frac{5,940 \times \text{GPM (per nozzle)}}{\text{MPH} \times W}
\]

**NOTE:** Always insert Orifice Plate with the side marked with the number facing the outlet.

Tabulated flow rates are for spraying water into air at atmospheric pressure. If your application creates backpressure, or if spraying into a liquid, measure and calibrate to ensure proper application rates.
DLQ TONGUE - JACK AND HITCH OPTIONS

4410351 DLQ HOSE STAND ASSEMBLY

4410378 PRESSURE GAUGE BRACKET ASSEMBLY, DLQ

Available:
4441023 SAFETY CHAIN, PAIR
12

DLQ TOOLBAR CONTROL ARM

4420842 RAVEN VALVE MOUNT, 3 SHUT-OFF
(OR)
4420917 RAVEN VALVE MOUNT, 5 SHUT-OFF
4420840 DLQ FLOW MONITOR PANEL, 1
(OR)
4420841 DLQ FLOW MONITOR PANEL, 2

4434172 PIN, 1.25 X 8.375, HEADLESS

TB 4410231-10, CYLINDER LOCKUP
WITH 640028 SAFETY PIN

HYDRAULIC CYLINDER, 3.5 X 10 X 1.5

4434172 PIN, 1.25 X 8.375, HEADLESS
4434173 PIN, 1 X 6.25, HEADLESS

4434172 PIN, 1.25 X 8.375, HEADLESS

DLQ 4420558 LOWER CONTROL ARM
DLQ 4420556 UPPER CONTROL ARM

DRAWN BY RICH SMOTHERS 6/2/2014
CHECKED BY
PRINT DATE 5/19/2017
CONFIG. Default

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COMMENTS:

DWG: DLQ HD TOOLBAR CONTROL ARM
SIZE A SHEET TITLE: Sheet1 REV A
SCALE: 1:18 SHEET 1 OF 1
4410352 AXLE, 10B, 120, TRUSSED, ASSEMBLY

4420492 AXLE, 10B, 120, TRUSSED, WELDMENT

S-5296-L-12 SPINDLE, 3.50X16

4410248, 873 10-BOLT HUB ASSEMBLY, COMPLETE
TB 4410224 CYLINDER PIN WITH BUSHINGS

4420312 PIN, 1 X 5.875, HEADED
(2) TB 4435070 BUSHING, WING LIFT CYLINDER PIN

4435072 PIN, 2 X 7.625, HEADLESS

4420213 PIN, 1 X 5.25, HEADED

HYDRAULIC CYLINDER, 3.5 X 30 X 1.5
141078 CYLINDER PIN W 2 COTTER PINS

HYDRAULIC CYLINDER, 3 X 12 X 1.25

4420594 PIN, .375 X 7.5, HEADED

4420893 PIN, 2 X 8.6875, HEADED

DRAWN BY RICH SMOTHERS 9/25/2015
CHECKED BY
PRINT DATE 9/19/2017
CONFIG. Default
COMMENTS:
DLQHD 60' TOOLBAR

- Hydraulic Cylinder, 4 x 36 x 1.5
- Hydraulic Cylinder, 3.5 x 24 x 1.5
- Pin, 1 x 5.25, Headed
- Pin, 2 x 7.625, Headless
- Pin, 1 x 5.875, Headed
- Pin, 1.5 x 6.375, Headed
- Pin, 1 x 7.25, Headed
- Pin, 2 x 9.625, Headed
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- Pin, 1 x 7.25, Headed
- Pin, 2 x 9.625, Headed
640028 LOCKUP PIN

TB 4410231-10, CYLINDER LOCKUP

DRAWN BY: Jeremy Newton
CHECKED BY: Jeremy Newton
PRINT DATE: 2/14/2017
CHECKED DATE: 2/16/2017
CONFIG.: Default
COMMENTS:

TOOLBAR CYLINDER STOP

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SCALE: 1:2

602 E. VAN BUREN ST., LENOX, IA 50851

Sheet 1

TOOLBAR CYLINDER STOP

REV

A

Sheet 1

SHEET 1 OF 1
2 PIN GAUGE WHEEL AND BRACKET

Hardware:
2 - PULL RING PIN, .75 x 4.5
2 - 152422 BOLT, .625 NC x 8, G5
2 - 150222 LOCK WASHER, .625, PLTD
2 - 150010 NUT, .625 NC, PLTD

Optional:
110118 WHEEL, 15 x 8 x 6 BOLT
640461 TIRE, 11L x 15 x 8 PLY

4420589 2 PIN GAUGE WHEEL BRACKET

4410271 2 PIN GAUGE WHEEL

4420032 INNER TUBE WELDMENT, 2 PIN GAUGE WHEEL

4410086 888 6-BOLT HUB ASSEMBLY, COMPLETE
DLQ 3-SHUTOFF RAVEN PLUMBING

BOOM VALVES
*1 VALVE PER BOOM SECTION*
RV063-0171-926

3/4" MULTI-PURPOSE HOSE, 200 PSI

FLOW METER
RV063-0171-793

1-1/2" MULTI-PURPOSE HOSE, 250 PSI

CONTROL VALVE
RV063-0171-894

TEE BRACKET
PLUMBING BRACKET

RETURN TO TANK
FROM TANK

VisaGage VISUAL FLOW MONITORS
*1 MONITOR ASSEMBLY PER ROW UNIT*
SMSS1 SINGLE MONITOR ASSEMBLY

ACE PUMP
FMC-150-HYD-206

THERMOID 3/8" AG SPRAY HOSE
TO ROW UNITS

DRAWN BY  RICH SMOTHERS  4/21/2016
CHECKED BY
PRINT DATE  5/22/2017
CONFIG. Default
COMMENTS:

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05/12/2016  S431
DECAL LAYOUT

CAUTION: STAND CLEAR OF WING (MS013)
GREASE DAILY (MS016)

REFLECTOR (YELLOW)
SERIAL TAG
DALTON AG Decal (Both Sides)
REFLECTOR (YELLOW)

CAUTION: STAND CLEAR OF WING (MS013)
GREASE DAILY (MS016)
CAUTION: STAND CLEAR OF WING (MS013)

REFLECTOR (ORANGE)

CAUTION: STAND CLEAR OF WING (MS013)
CAUTION: STAND CLEAR OF WING (MS013)

DRAWN BY RICH SMOTHERS 9/24/2015
CHECKED BY
PRINT DATE 7/15/2016
CONFIG Default

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COMMENTS:

DWG: DLQ - DECAL LAYOUT
SIZE SHEET TITLE: Sheet1 REV A
SCALE: 1:60 SHEET 1 OF 1
PARTS ORDERING PROCEDURE

Your Dalton Ag dealer is interested in your new fertilizer application equipment and has the desire to help you get the most value from it. Through the help of this manual, you will find you can do some of the regular maintenance yourself. For parts and service, contact the Dalton Ag Dealership from which you purchased your fertilizer application equipment or your local Dalton Ag dealer.

When replacement parts are required, consult the applicable illustration and parts list to obtain the correct part name and number. When requesting a replacement part, always include the following information:

1. Complete Part Number
2. Description
3. Quantity Required
4. Machine and Model Number
5. Machine Serial Number - located on the topside of the frame near hitch
6. Provide complete name and address for where and how parts are to be shipped.

NOTE: Right and left hand parts and sides of the units are determined by standing at the rear and facing in the direction of forward travel.

EQUIPMENT MODEL:___________________________________
EQUIPMENT SERIAL NO.:________________________________
DATE OF PURCHASE:___________________________________
NAME OF DEALER:_____________________________________
DEALER’S PHONE NUMBER:______________________________

Thank you for your business!

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