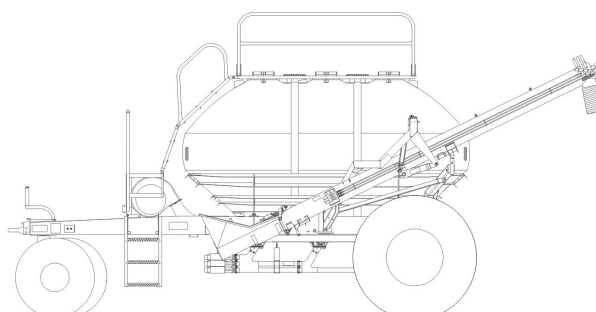
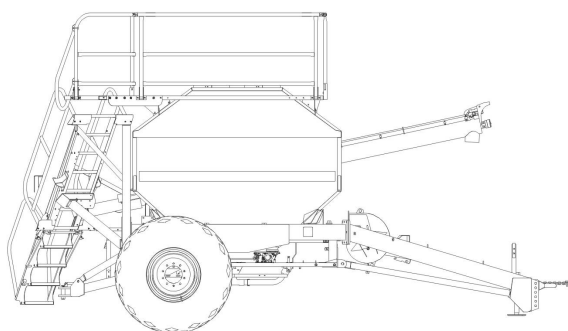




## REPAIR MANUAL



**SC180**  
**SC230**  
**SC260**  
**SC380**  
**SC430**

# Contents

## INTRODUCTION

## DISTRIBUTION SYSTEMS

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PRIMARY HYDRAULIC POWER SYSTEM

A.10.A

ELECTRICAL POWER SYSTEM

A.30.A

LIGHTING SYSTEM

A.40.A

ELECTRONIC SYSTEM

A.50.A

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A.50.A

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HITCH Rear hitch

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L.10.D

SEEDING Air system

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SEEDING Metering system

L.10.F

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L.10.G



**NEW HOLLAND**

# **INTRODUCTION**

# Contents

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## Foreword

### Technical Information

This manual has been produced by a new technical information system. This new system is designed to deliver technical information electronically on CDROM and in paper manuals. A coding system called ICE has been developed to link the technical information to other Product Support functions e.g., Warranty.

Technical information is written to support the maintenance and service of the functions or systems on a customers machine. When a customer has a concern on his machine it is usually because a function or system on his machine is not working at all, is not working efficiently, or is not responding correctly to his commands. When you refer to the technical information in this manual to resolve that customers concern, you will find all the information classified using the new ICE coding, according to the functions or systems on that machine. Once you have located the technical information for that function or system then you will find all the mechanical, electrical or hydraulic devices, components, assemblies and sub-assemblies for that function or system. You will also find all the types of information that have been written for that function or system, the technical data (specifications), the functional data (how it works), the diagnostic data (fault codes and troubleshooting) and the service data (remove, install adjust, etc.).

By integrating this new ICE coding into technical information, you will be able to search and retrieve just the right piece of technical information you need to resolve that customers concern on his machine. This is made possible by attaching 3 categories to each piece of technical information during the authoring process.

The first category is the Location, the second category is the Information Type and the third category is the Product:

- LOCATION - is the component or function on the machine, that the piece of technical information is going to describe e.g. Fuel tank.
- INFORMATION TYPE - is the piece of technical information that has been written for a particular component or function on the machine e.g. Capacity would be a type of Technical Data that would describe the amount of fuel held by the Fuel tank.
- PRODUCT - is the model that the piece of technical information is written for.

Every piece of technical information will have those 3 categories attached to it. You will be able to use any combination of those categories to find the right piece of technical information you need to resolve that customers concern on his machine.

That information could be:

- the description of how to remove the cylinder head
- a table of specifications for a hydraulic pump
- a fault code
- a troubleshooting table
- a special tool

## How to Use this Manual

This manual is divided into Sections. Each Section is then divided into Chapters. Contents pages are included at the beginning of the manual, then inside every Section and inside every Chapter. An alphabetical Index is included at the end of a Chapter. Page number references are included for every piece of technical information listed in the Chapter Contents or Chapter Index.

Each Chapter is divided into four Information types:

- Technical Data (specifications) for all the mechanical, electrical or hydraulic devices, components and, assemblies.
- Functional Data (how it works) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Diagnostic Data (fault codes, electrical and hydraulic troubleshooting) for all the mechanical, electrical or hydraulic devices, components and assemblies.
- Service data (remove disassembly, assemble, install) for all the mechanical, electrical or hydraulic devices, components and assemblies.

## Sections

Sections are grouped according to the main functions or a systems on the machine. Each Section is identified by a letter A, B, C etc. The amount of Sections included in the manual will depend on the type and function of the machine that the manual is written for. Each Section has a Contents page listed in alphabetic/numeric order. This table illustrates which Sections could be included in a manual for a particular product.

	SECTION											
	A - Distribution Systems											
	B - Power Production											
	C - Power Train											
	D - Travelling											
	E - Body and Structure											
	F - Frame Positioning											
	G - Tool Positioning											
	H - Working Arm											
	J - Tools and Couplers											
	K - Crop Processing											
	L - Field Processing											
PRODUCT												
Tractors	X	X	X	X	X	X		X	X			
Vehicles with working arms: backhoes, excavators, skid steers, .....	X	X	X	X	X	X	X	X	X			
Combines, forage harvesters, balers, ....	X	X	X	X	X	X			X	X		
Seeding, planting, floating, spraying equipment, ....	X	X	X	X	X	X	X		X		X	
Mounted equipment and tools, .....					X	X	X		X			

This manual contains these sections.

### Contents

INTRODUCTION	
DISTRIBUTION SYSTEMS	A
TRAVELLING	D
WORKING ARM	H
FIELD PROCESSING	L

Your manual contains these Sections. The contents of each Section are explained over the following pages.

---

## Section Contents

### SECTION A, DISTRIBUTION SYSTEMS

This Section covers the main systems that interact with most of the functions of the product. It includes the central parts of the hydraulic, electrical, electronic, pneumatic, lighting and grease lubrication systems. The components that are dedicated to a specific function are listed in the Chapter where all the technical information for that function is included.

Contents	
DISTRIBUTION SYSTEMS - A	
PRIMARY HYDRAULIC POWER SYSTEM	A.10.A
SC180, SC230, SC260, SC380, SC430	
ELECTRICAL POWER SYSTEM	A.30.A
SC180, SC230, SC260, SC380, SC430	
LIGHTING SYSTEM	A.40.A
SC180, SC230, SC260, SC380, SC430	
ELECTRONIC SYSTEM	A.50.A
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### SECTION D, TRAVELLING

Contents	
TRAVELLING - D	
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SC180 Tow Behind, SC230 Tow Behind, SC260 Tow Behind, SC380 Tow Behind, SC430 Tow Behind	
REAR AXLE	D.12.A
SC180, SC230, SC260, SC380, SC430	
WHEELS AND TRACKS Wheels	D.50.C
SC180, SC230, SC260, SC380, SC430	

## INTRODUCTION

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### SECTION H, WORKING ARM

This Section covers all the functions related to moving the machine, including tracks, wheels, steering and braking. It covers all the axles both driven axles and non-driven axles, including any axle suspension.

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#### Contents

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##### WORKING ARM - H

HITCH Front Hitch SC180 Tow Behind, SC230 Tow Behind, SC260 Tow Behind, SC380 Tow Behind, SC430 Tow Behind	H.10.B
HITCH Rear Hitch SC180, SC230	H.10.C

### SECTION L, FIELD PROCESSING

This Section covers all the field processing functions of the machine.

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#### Contents

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##### FIELD PROCESSING - L

SEEDING Mechanical System SC180, SC230, SC260, SC380, SC430	L.10.B
SEEDING Electronic System SC180, SC230, SC260, SC380, SC430	L.10.C
SEEDING Fan System SC180, SC230, SC260, SC380, SC430	L.10.D
SEEDING Air System SC180, SC230, SC260, SC380, SC430	L.10.E
SEEDING Metering System SC180, SC230, SC260, SC380, SC430	L.10.F
SEEDING Optional Tank SC180, SC230	L.10.G



## Chapters

Each Chapter is identified by a letter and number combination e.g. Field Processing L.10.C. The first letter is identical to the Section letter i.e. Chapter L.10.C is inside Section L, Field Processing. The Chapter Contents lists all the "Technical Data" (specifications), "Functional Data" (how it works), "Service Data" (remove, install adjust, etc.,) and "Diagnostic Data" (fault codes and troubleshooting) that have been written in that Chapter for that function or system on the machine.

Contents	
FIELD PROCESSING - L	
SEEDING - Electronic system - 10.C	
TECHNICAL DATA	
Electronic Control	
Electronic Control - NH3 control - Calibration (L10.C92.20 - D30.A10)	6
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Command	
Command Switch box - Dynamic description (L.10.C.05.30 - C.30.A.10)	7
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SERVICE	
SEEDING Electronic system - Calibration (L.10.C - F.90.A.40)	32
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DIAGNOSTIC	
SEEDING Electronic system - Troubleshooting (L.10.C - G.40.A.10)	53
SC180, SC230, SC260, SC380, SC430	

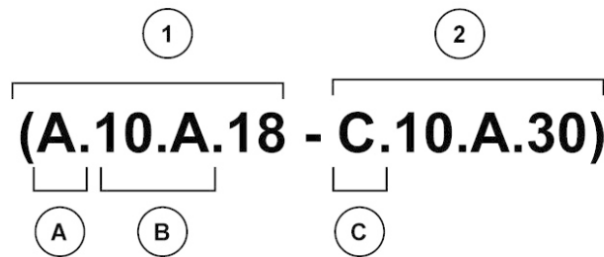
The Chapter Index lists in alphabetical order all the types of information (called Information Units) that have been written in that Chapter for that function or system on the machine.

Contents	
FIELD PROCESSING - L	
Command Calibration switch - Short circuit (L.10.C.05.10 - G.30.B.52)	55
SC180, SC230, SC260, SC380, SC430	
Command Calibration switch - Testing (L.10.C.05.10 - G.40.A.20)	56
Command Meter Switch - Detailed view (L.10.C.05.20 - C.10.A.50)	9
Command Switch box- Detailed view (L.10.C.05.30 - C.10.A.50)	8
SC180, SC230, SC260, SC380, SC430	

## Information Units and Information Search

Each chapter is composed of information units. Each information unit has the ICE code shown in parentheses which indicates the function and the type of information written in that information unit. Each information unit has a page reference within that Chapter. The information units provide a quick and easy way to find just the right piece of technical information you are looking for.

example information unit	Stack valve - Sectional View (A.10.A.18 - C.10.A.30)				
Information Unit ICE code	A	10.A	18	C	10.A.30
ICE code classification	Distribution systems	Primary hydraulic power	Stack valve	Functional data	Sectional view



CRIL03J033E01 1

Navigate to the correct information unit you are searching for by identifying the function and information type from the ICE code.

- **(1)** Function and **(2)** Information type.
- **(A)** corresponds to the sections of the repair manual.  
**(B)** corresponds to the chapters of the repair manual.  
**(C)** corresponds to the type of information listed in the chapter contents, Technical data, Functional Data, Diagnostic or Service.  
**(A)** and **(B)** are also shown in the page numbering on the page footer.  
 THE REST OF THE CODING IS NOT LISTED IN ALPHA-NUMERIC ORDER IN THIS MANUAL.
- You will find a table of contents at the beginning and end of each section and chapter.  
 You will find an alphabetical index at the end of each chapter.
- By referring to **(A)**, **(B)** and **(C)** of the coding, you can follow the contents or index (page numbers) and quickly find the information you are looking for.

## Page Header and Footer

The page header will contain the following references:

- Section and Chapter description

The page footer will contain the following references.

---

87036387 1 07/04/2004  
A.10.A / 8

104030S1 2

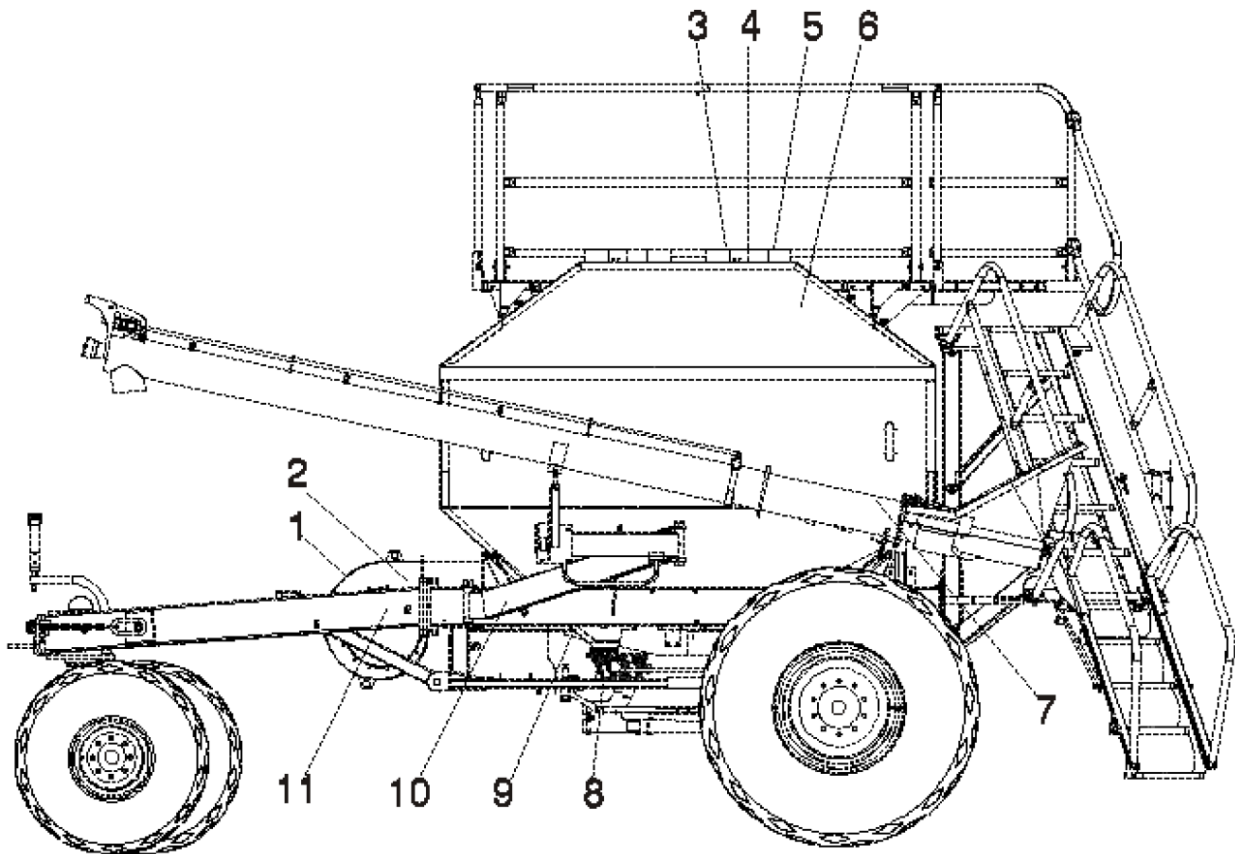
### Page Footer Information

Printed references found at the base of each page then equate to

- The publication number for that Manual, Section or Chapter(87036387)
- Revision number of the publication (1)
- Publication date (07/04/2004)
- Chapter reference (A.10.A)
- Page reference (8)

## Decals

SC180, SC230



103149c1 1

### Safety Decal Locations - Tow Behind Cart

Refer to the description of the decals.

1. DANGER - Danger Fan



GD50073 2

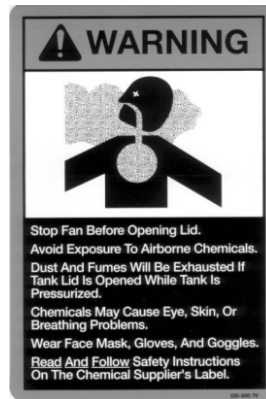
2. DANGER - Danger, Keep Shields in Place.



gl70052 3

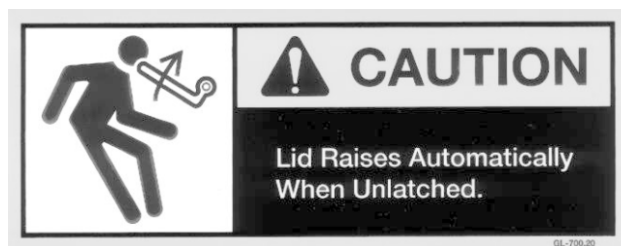
## INTRODUCTION

### 3. WARNING - Tank Lids



Gd50079 4

### 4. CAUTION - Lid Raises Automatically (On each tank lid.)



GL70020 5

### 5. WARNING - Do Not Ride or Stand on Tank (On each tank lid.)



GD50071 6

### 6. WARNING - No Step



22767 7

### 7. DANGER - Auger Flying



GD50080 8

8. CAUTION - Keep Hands Clear of Manifold



GL70021 9

9. WARNING - Rotating Parts Hazard  
(Right side of air cart.)



Gd50078 10

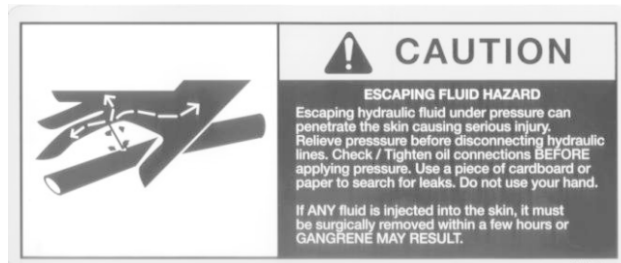
10. CAUTION - Before Operating or Servicing



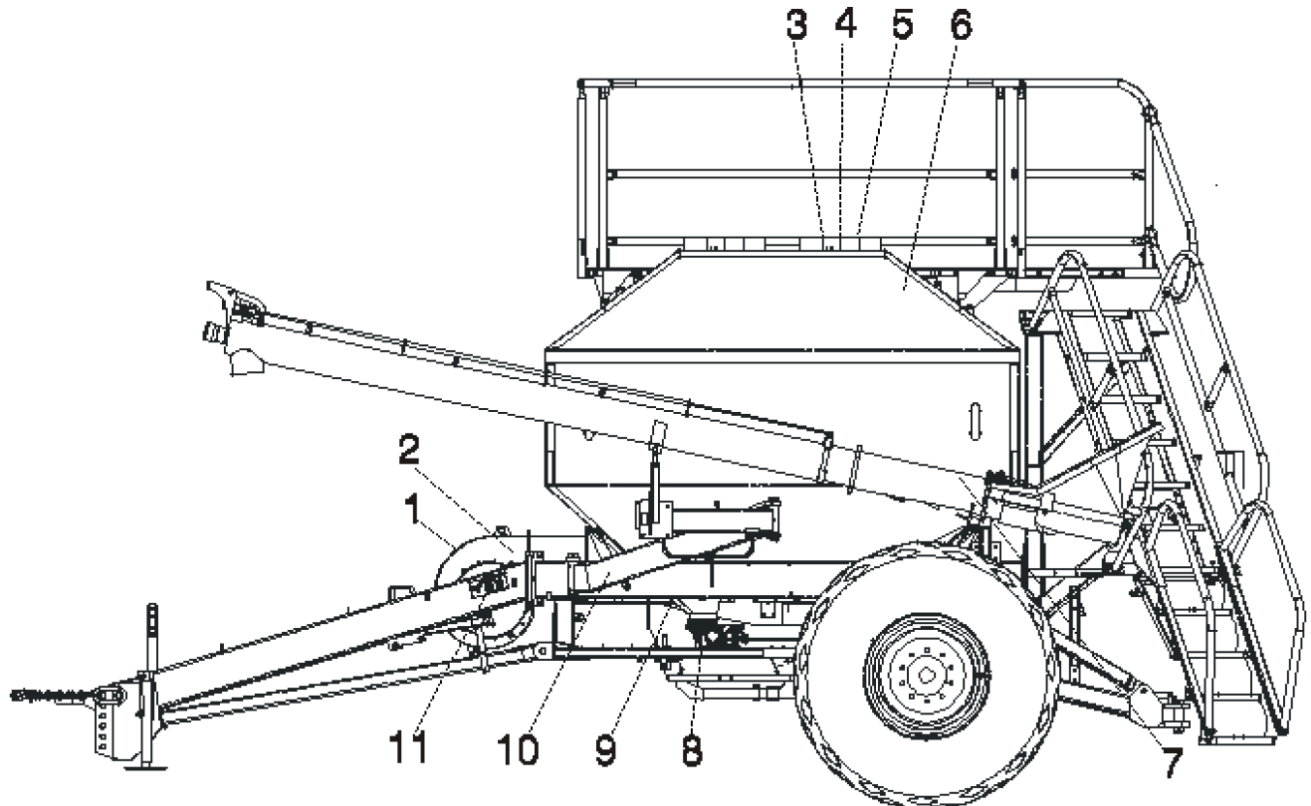
GD50072 11

11. CAUTION - Escaping Fluid Hazard

## INTRODUCTION



GD50077 12



103150c1 13

### Safety Decal Locations - Tow Between Air Cart

Refer to the description of the decals.

1. DANGER - Danger Fan



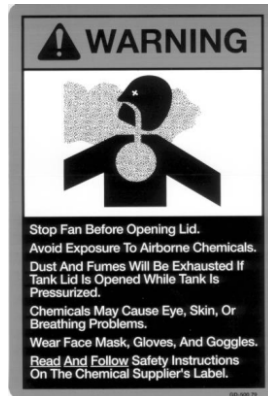
GD50073 14

2. DANGER - Danger, Keep Shields in Place.



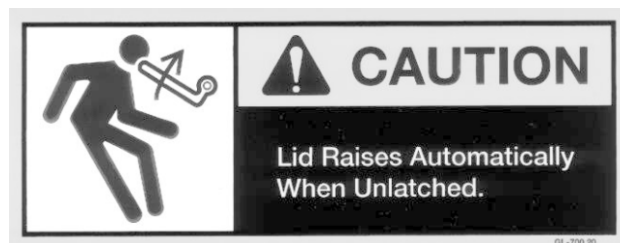
gl70052 15

3. WARNING - Tank Lids



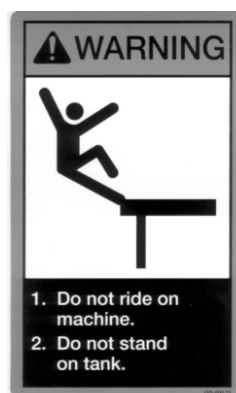
Gd50079 16

4. CAUTION - Lid Raises Automatically  
(On each tank lid.)



GL70020 17

5. WARNING - Do Not Ride or Stand on Tank  
(On each tank lid.)



GD50071 18

6. WARNING - No Step





22767 19

7. DANGER - Auger Flighting



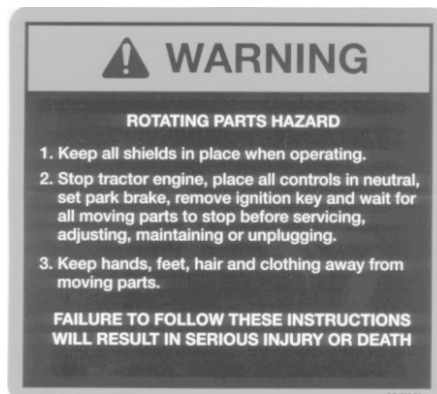
GD50080 20

8. CAUTION - Keep Hands Clear of Manifold



GL70021 21

9. WARNING - Rotating Parts Hazard (Right side of air cart.)



Gd50078 22

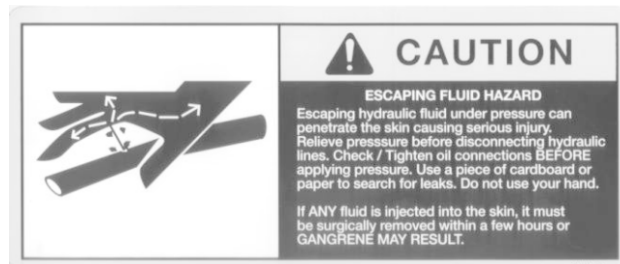
10. CAUTION - Before Operating or Servicing

## INTRODUCTION



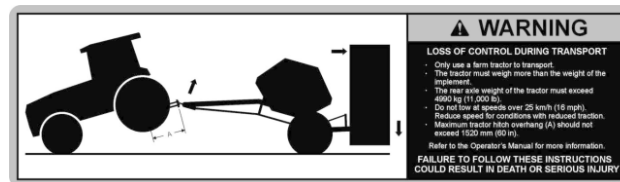
GD50072 23

### 11. CAUTION - Escaping Fluid Hazard



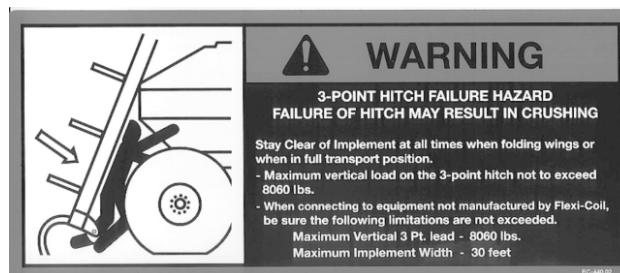
GD50077 24

### 12. WARNING - Loss of Control During Transport (Three point hitch only.)



23699 25

### 13. WARNING - Three Point Hitch Failure Hazard (Three point hitch only.)

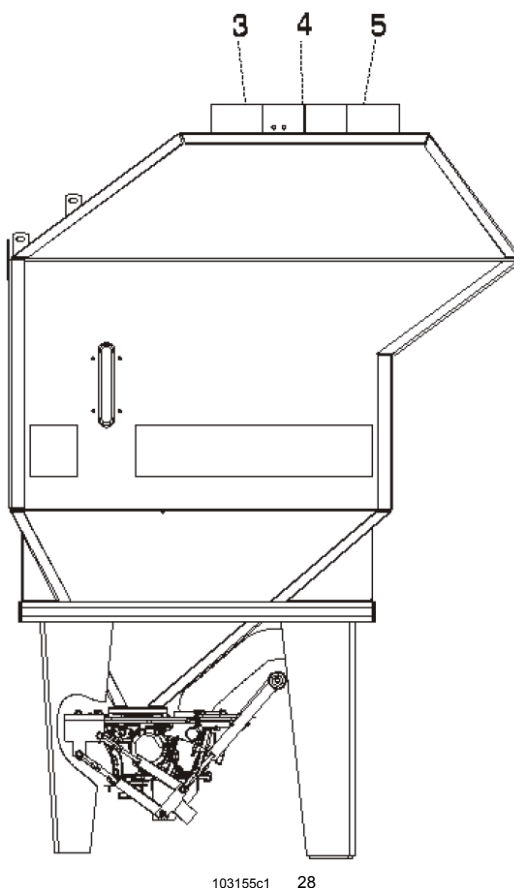


RC44002 26

### 14. DANGER - Hitch Upending Hazard (Three point hitch only.)



RC44001 27



103155c1 28

### Optional Third Tank - Decal Locations

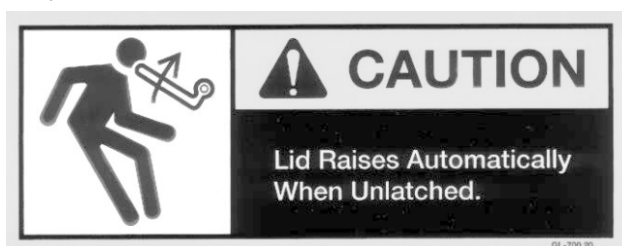
Refer to the description of the decals.

1. not used
2. not used
3. WARNING - Do Not Ride or Stand on Machine.



GD50071 29

4. CAUTION - Lid Raises Automatically

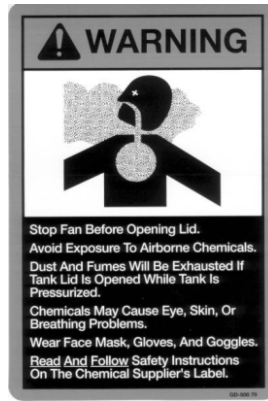


GL70020 30

5. WARNING - Fumes

## INTRODUCTION

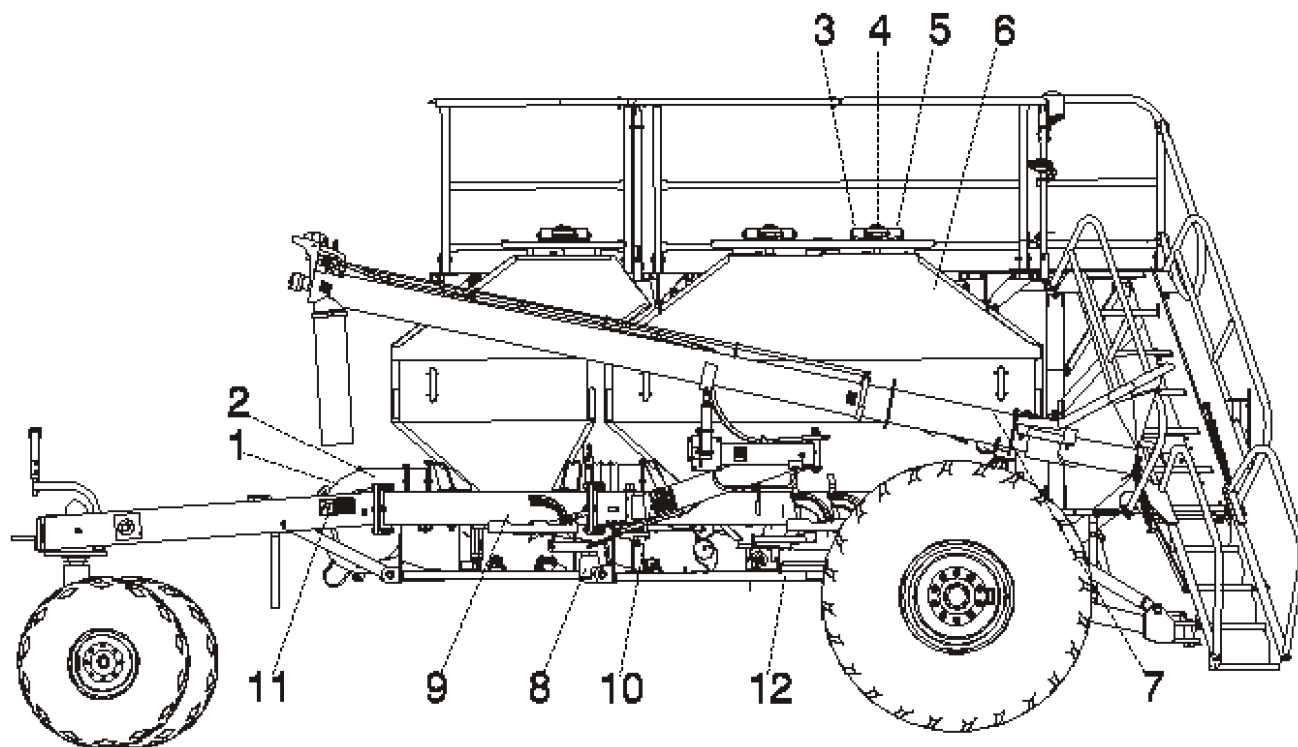
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Gd50079 31

## Decals

SC260



103151c1 1

### Safety Decal Locations - Tow Behind Air Cart

Refer to decals for descriptions.

1. DANGER - Fan Shields



GD50073 2

2. DANGER - Keep Shields in Place

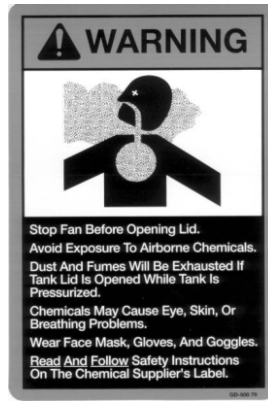


gl70052 3

3. WARNING - Fumes

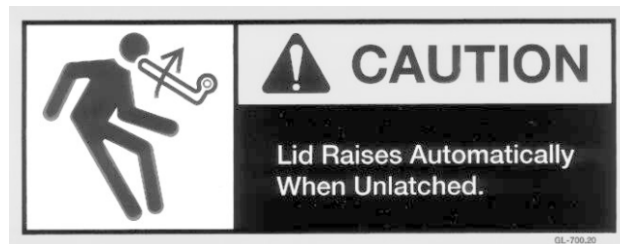
## INTRODUCTION

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Gd50079 4

4. CAUTION - Lid Raises Automatically  
(On all tank lids.)



GL70020 5

5. WARNING - Do Not Stand or Ride  
(On all tank lids.)



GD50071 6

6. WARNING - No Step



22767 7

7. DANGER - Flying



GD50080 8

8. CAUTION - Keep Hands Clear of Center Manifold.



GL70021 9

9. WARNING - Rotating Parts Hazard  
(Right side of air cart.)



Gd50078 10

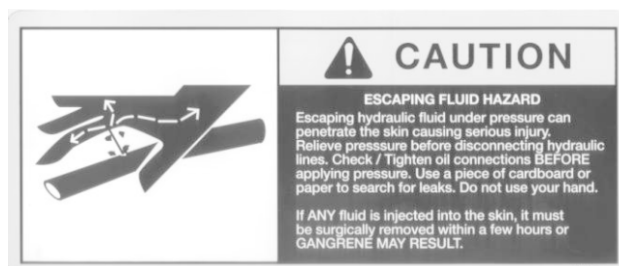
10. CAUTION - Operation and Service



GD50072 11

11. CAUTION - Escaping Fluid Hazard

## INTRODUCTION



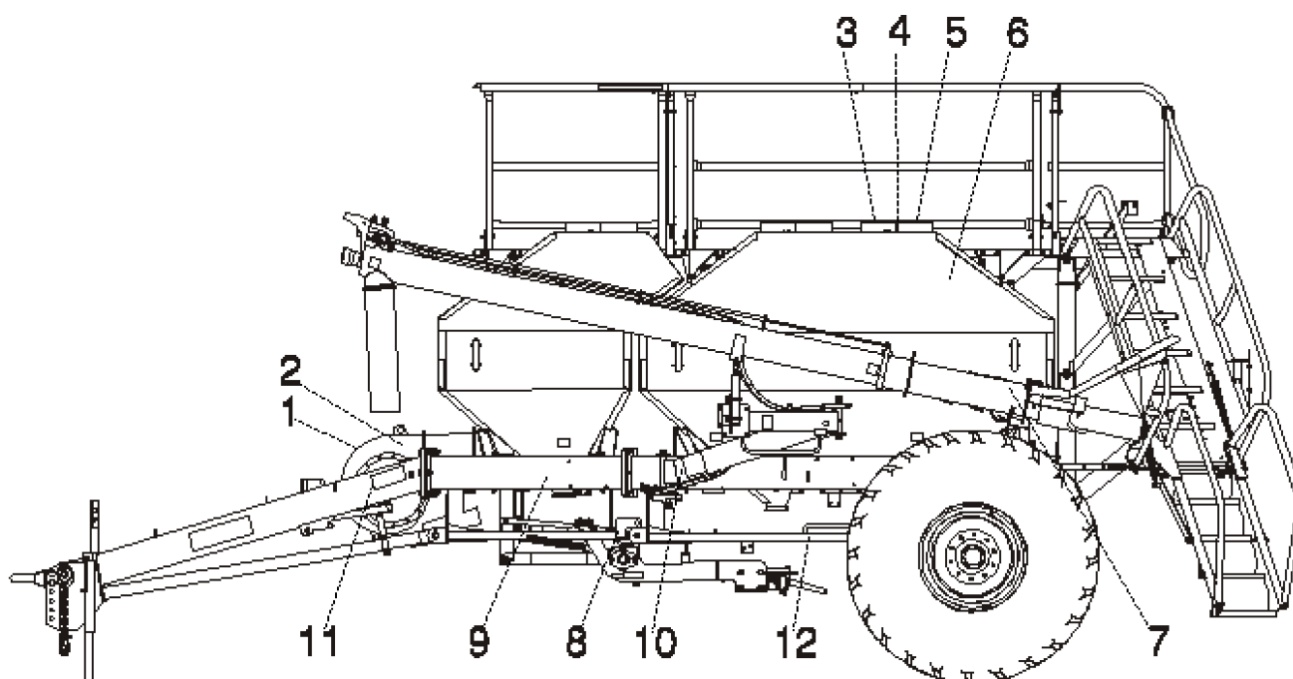
GD50077 12

12. CAUTION - Manifold is heavy.



23759

23759 13



103152c1 14

### Safety Decal Locations - Tow Between Air Cart

Refer to the decal descriptions.

1. DANGER - Fan Shields



GD50073 15

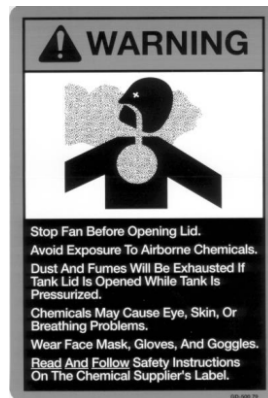
2. DANGER - Keep Shields in Place





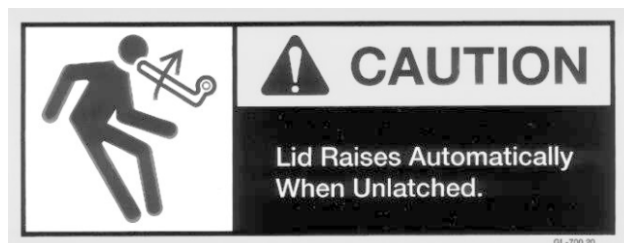
gl70052 16

3. WARNING - Fumes



Gd50079 17

4. CAUTION - Lid Raises Automatically  
(On all tank lids.)



GL70020 18

5. WARNING - Do Not Stand or Ride  
(On all tank lids.)



GD50071 19

6. WARNING - No Step



22767 20

7. DANGER - Auger Flighting



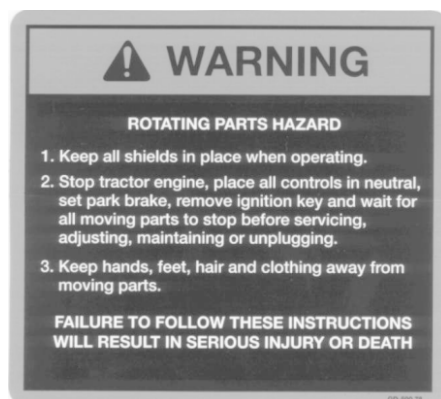
GD50080 21

8. CAUTION - Keep Hands Clear of Center Manifold



GL70021 22

9. WARNING - Rotating Parts Hazard  
(Right side of air cart.)



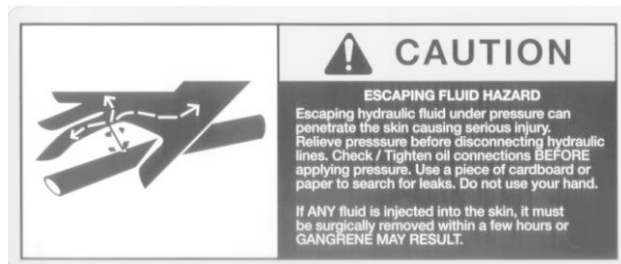
Gd50078 23

10. CAUTION - Operation and Service



GD50072 24

11. CAUTION - Escaping Fluid Hazard



GD50077 25

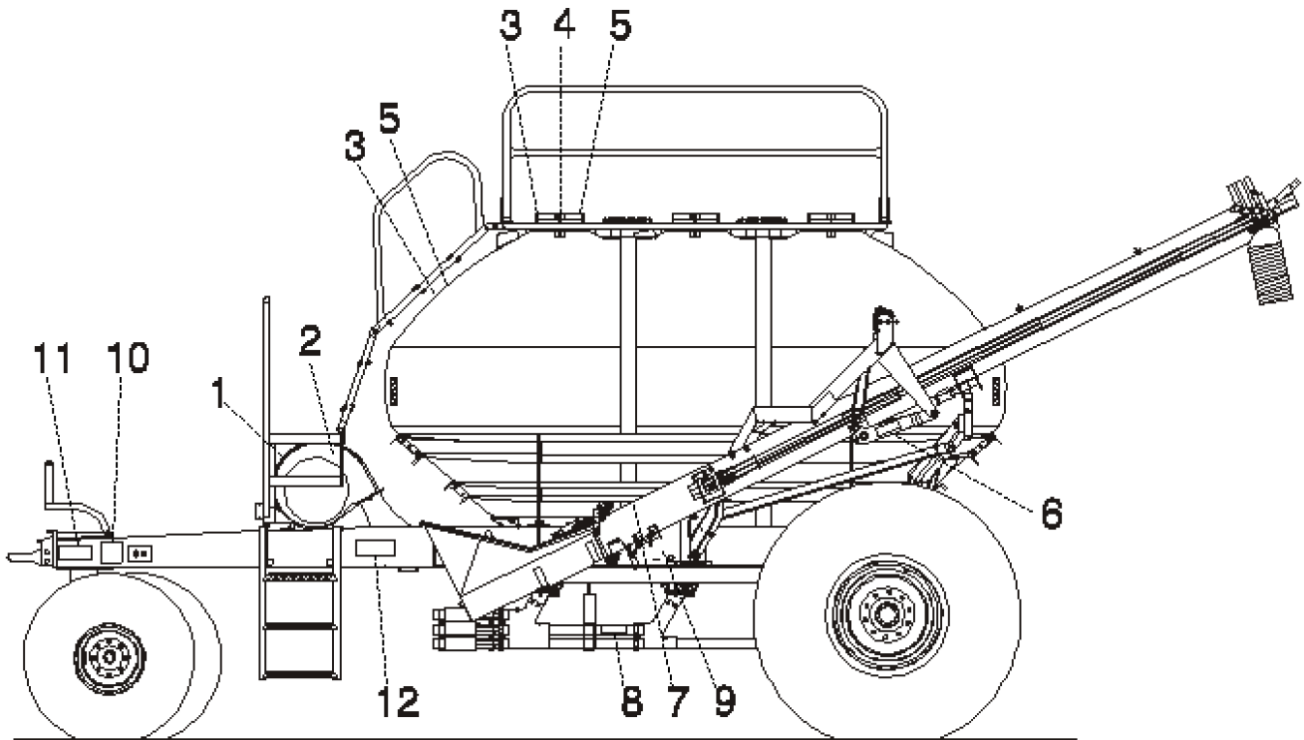
12. CAUTION - Manifold is Heavy



23759 26

## Decals

SC380, SC430



103153c1 1

### Safety Decal Locations - Tow Behind Air Cart

Refer to Decal Descriptions

1. DANGER - Fan Shield



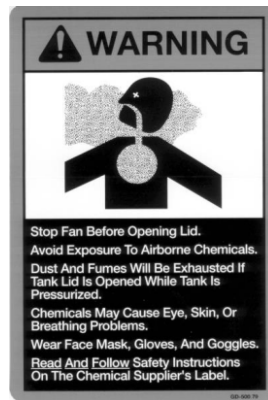
GD50073 2

2. DANGER - Keep Shields in Place



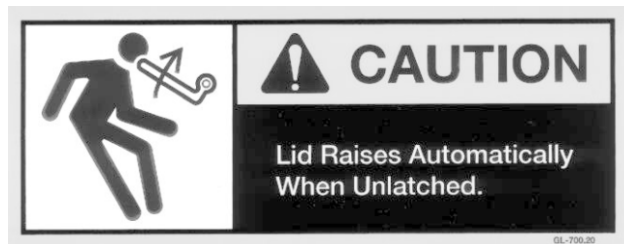
gl70052 3

3. WARNING - Fumes  
(On each tank lid.)



Gd50079 4

4. CAUTION - Lid Raises Automatically  
(On each tank lid.)



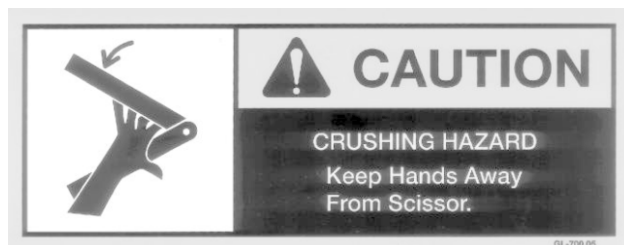
GL70020 5

5. WARNING - Do Not Ride or Stand on Machine  
(On each tank lid.)



GD50071 6

6. CAUTION - Crushing Hazard



GL70005 7

7. DANGER - Auger Flying



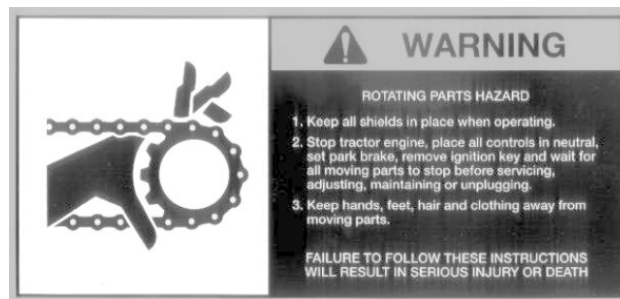
GD50080 8

8. CAUTION - Keep Hands Clear of Manifold



GL70021 9

9. WARNING - Rotating Parts Hazard  
(Mechanical air carts only.)



GL70023 10

10. CAUTION - Operating and Service



GD50072 11

11. CAUTION - Escaping Fluid Hazard