

**MASSEY FERGUSON**

# MF 9000

Series Planters

Models: 9202 / 9222



# SERVICE MANUAL

**FROM MASSEY FERGUSON**

---

# Massey Ferguson®

9202 / 9222  
Planter

## SERVICE MANUAL 4283528M1

### CONTENTS

GENERAL INFORMATION .....	01
ROW UNIT .....	02
ELECTRICAL .....	03
FERTILIZER AND CHEMICAL SYSTEMS .....	04
HYDRAULIC .....	05
MAIN FRAME .....	06
DRIVE CLUTCH .....	07
SECTION CONTROL .....	08
CONSOLE .....	09
ADJUSTMENTS .....	10
SEED METER AIR SYSTEM .....	11
TROUBLESHOOTING .....	12
INDEX .....	13

---

## NOTES

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**

**Massey Ferguson®**

**9202 / 9222  
Planter**

**SERVICE MANUAL  
4283528M1**

**01 - General Information**

**Contents**

GENERAL INFORMATION

General .....	01-3
Serial Number Plate Location .....	01-4
Serial Number Description .....	01-4
Safety Information .....	01-5
Preparation .....	01-5
Safety Alert Symbol .....	01-5
Safety Messages .....	01-5
Informational Messages .....	01-6
Safety Signs .....	01-6
A Word To The Operator .....	01-7
Wheel Lift Cylinder Stops .....	01-8
Marker Lockup Valves .....	01-9
Wing Latches .....	01-10
Top Link - Flex Frame .....	01-11
Servicing .....	01-12
General Operation and Service .....	01-12
General Maintenance .....	01-20
Tire Safety .....	01-21
Adjusting the Hitch .....	01-21
Drive Belts .....	01-22
Banded Drive Belt .....	01-22
Maintenance of Belts .....	01-23
Belt Changing Guides .....	01-24
Belt Sheave Alignment .....	01-26
Belt Run In Procedure .....	01-26
Belt Troubleshooting .....	01-27
Belt Problem and Wear Guide .....	01-27
Belt Speed Calculation Formulas .....	01-40
Roller Chains .....	01-41
Inspection of Drive Chains and Sprockets .....	01-41
Drive Chain Adjustment and Tightening .....	01-42
Drive Chain Sprocket and Idler Alignment .....	01-43
Drive Chain Elongation and Sprocket Wear .....	01-44
Normal Tooth Wear .....	01-45
Not Normal Tooth Wear .....	01-45
Worn Chain on New Sprockets .....	01-45
Drive Chain Service Tips .....	01-46
Chain Replacement .....	01-47
Cleaning and Lubricating Chains .....	01-48
Drive Chain Lubrication .....	01-48
Drive Chain Lubricants .....	01-48
Good Drive Chain Lubrication .....	01-49

# Contents

---

Roller Chain Drive Troubleshooting Guide .....	01-50
Electrical .....	01-53
General Information .....	01-53
Hydraulics .....	01-57
Hydraulic Cylinder Inspection .....	01-57
Tires and Wheels .....	01-58
Tire Pressure .....	01-58
Removing Wheel from machine and Removing Tire. ....	01-58
Tire Mounting .....	01-58
Maintenance of Tires .....	01-59
Bearing Replacement (Eccentric Self-Locking Collar) .....	01-60
Gib Key Removal and Installation .....	01-61
Torque Charts .....	01-62
Standard Torque Specifications .....	01-62
Metric Capscrew Markings and Torque Values .....	01-63
Metric Conversions .....	01-64
Fractions, Decimals, and Millimeters Conversion Chart .....	01-65
Decimal Equivalents of 8ths, 16ths, 32nds, and 64ths .....	01-70
Decimal Equivalents Of Letter Size Drills .....	01-71
Decimal Equivalents of Number Size Drills .....	01-72
Tap Drill Sizes - S.A.E. & Metric .....	01-74
American Standard Pipe Thread and Tap Drill Sizes .....	01-78
Electrical Formulas .....	01-79
Amperes (Current Flow) .....	01-79
Volts (Electromotive Force) .....	01-79
Ohms (Resistance) .....	01-79
Watts .....	01-79
Horsepower .....	01-79
Geometrical Formulas .....	01-79
Circumference of a Circle .....	01-79
Area of a Circle .....	01-79
Volume of a Cylinder .....	01-79
Volume of a Sphere .....	01-79
Area of a Triangle .....	01-79
Metric to Imperial and Imperial to Metric Conversion Factors .....	01-79
Measures of Temperature .....	01-79
Measures of Power .....	01-79
Measures of Pressure .....	01-79
Measures of Length .....	01-80
Measures of Area .....	01-80
Measures of Volume (Dry) .....	01-81
Measures of Volume (Liquid) .....	01-81
Measures of Mass (Weight) .....	01-82
Measures of Effort (Torque) .....	01-82
Reference Tables .....	01-83
Installation Instructions .....	01-84
Specifications .....	01-85
Frame .....	01-85
9202 Rigid .....	01-85
9222 Flex .....	01-85
Row Units .....	01-86
Hydraulic System .....	01-86
Air System .....	01-86
Section Control Switch Box .....	01-86
Pneumatic Down Pressure .....	01-87
Transmissions .....	01-87
Shear Pins .....	01-87
Monitor .....	01-87
Highway Lamps .....	01-87
Approximate Shipping Weights .....	01-87
Tractor Requirements .....	01-87
Maximum Speed .....	01-88

## GENERAL INFORMATION

### GENERAL



FIG. 1

**FIG. 1:** Model 9222 Horizontal Wing Fold Planter

Horizontal Wing Fold Planters use forward folding frame designs, providing narrow transport widths for pull-type 12-row models. The planter is a good selection for customers with no-till or reduced-tillage operations. All models are available with rigid or flexible frames.

The models include:

Model 9202	12-Row, 30 inch	Rigid Frame
Model 9222	12-Row, 30 inch	Flex Frame

The planters use row units with positive air metering for accurate seed spacing.

This manual contains information necessary for the correct adjustment and safe operation of your planter. Read the manual carefully.



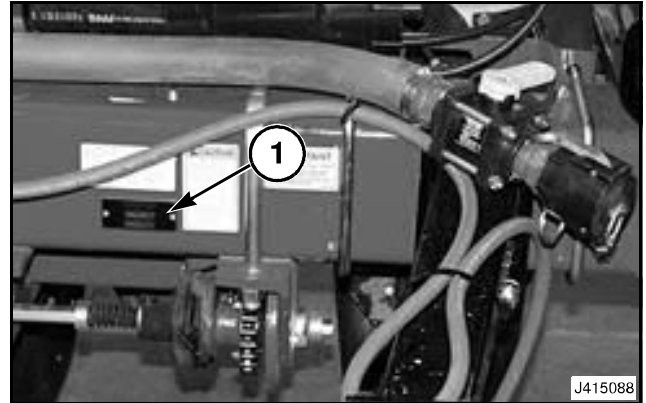
**WARNING:** Pictures in this manual may show protective shields and guards opened or removed for illustration purposes. Be sure all shields and guards are in place during operation.

This manual was prepared from the latest information available at publication time. The Company reserves the right to make changes at any time without notice or obligation.

## General Information

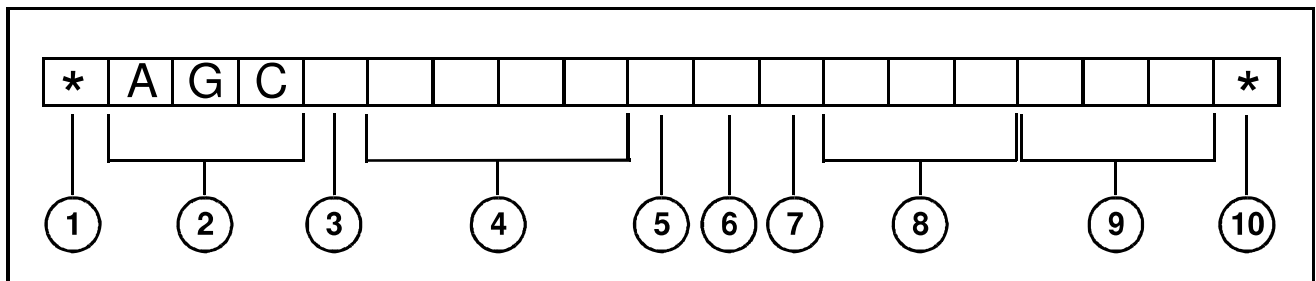
### SERIAL NUMBER PLATE LOCATION

**FIG. 2:** The serial number plate (1) is located on the left end of the frame.



**FIG. 2**

### Serial Number Description



**FIG. 3**

**FIG. 3:** Description of the serial number for model year 2010 and up.

- (1) Beginning symbol
- (2) World Manufacturer Code
- (3) Brand Code
- (4) Model Identifier (Model number)
- (5) Check Letter (0 or used if model identifier is five digits)
- (6) Model Year Code (A=2010, B=2011, C=2012, and on)
- (7) Plant Code
- (8) Family Code
- (9) Unit Number for the Year
- (10) Ending symbol

**NOTE:** For serial number breaks in this manual, only the information from the model year code and following will be given.

### SAFETY INFORMATION



This is the safety alert symbol. The safety alert symbol will direct your attention to information that involves your safety.

Read and understand all safety information in the machine operator's manual before continuing with these instructions.

### PREPARATION

Clean oil, dirt, and crop material from the area on the machine where the work is to be done.

### SAFETY ALERT SYMBOL

**FIG. 4:** The safety alert symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Look for the safety alert symbol both in this manual and on safety signs on this machine. The safety alert symbol will direct your attention to information that involves your safety and the safety of others.

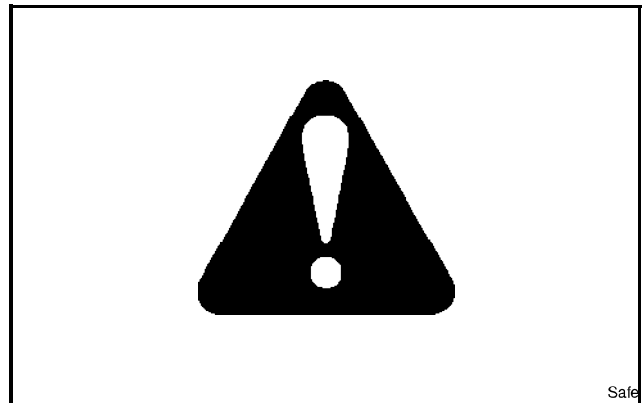


FIG. 4

### SAFETY MESSAGES

**FIG. 5:** The words DANGER, WARNING or CAUTION are used with the safety alert symbol. Learn to recognize these safety alerts and follow the recommended precautions and safety practices.



**DANGER:** Indicates an imminently hazardous situation that, if not avoided, will result in DEATH OR VERY SERIOUS INJURY.



**WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in DEATH OR SERIOUS INJURY.



**CAUTION:** Indicates a potentially hazardous situation that, if not avoided, may result in MINOR INJURY.



FIG. 5

## General Information

---

### INFORMATIONAL MESSAGES

The words IMPORTANT and NOTE are not related to personal safety, but are used to give additional information and tips for operating or servicing this equipment.

*IMPORTANT: Identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of the machine, process, or its surroundings.*

*NOTE: Identifies points of particular interest for more efficient and convenient repair or operation.*

### SAFETY SIGNS



**WARNING: DO NOT remove or obscure safety signs. Replace any safety signs that are not readable or are missing. Replacement signs are available from your dealer in the event of loss or damage. The actual location of the safety signs is illustrated at the end of this section.**

If a used machine has been purchased, make sure all safety signs are in the correct location and can be read.

Replace any safety signs that can not be read or are missing. Replacement safety signs are available from your dealer.

### A WORD TO THE OPERATOR

**FIG. 6:** It is YOUR responsibility to read and understand the safety section in this manual and the manual for all attachments before operating this machine. Remember YOU are the key to safety. Good safety practices not only protect you, but also the people around you.

Study the features in this manual and make them a working part of your safety program. Keep in mind that this safety section is written only for this type of machine. Practice all other usual and customary safe working precautions, and above all REMEMBER - SAFETY IS YOUR RESPONSIBILITY. YOU CAN PREVENT SERIOUS INJURY OR DEATH.

This safety section is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of your machine. This section also suggests possible ways of dealing with these situations. This section is NOT a replacement for other safety practices featured in other sections of this manual.

Personal injury or death may result if these precautions are not followed.

Learn how to operate the machine and how to use the controls properly.

Do not let anyone operate the machine without instruction and training.

For your personal safety and the personal safety of others, follow all safety precautions and instructions found in the manuals and on safety signs affixed to the machine and all attachments.

Use only approved attachments and equipment.

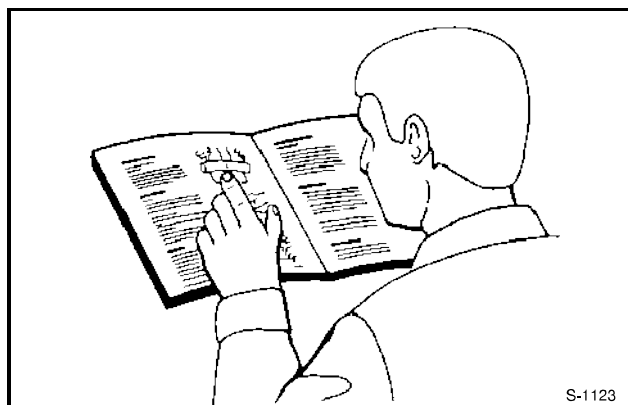
Make sure your machine has the correct equipment needed by the local regulations.



**WARNING:** An operator should not use alcohol or drugs which can affect their alertness or coordination. An operator on prescription or 'over the counter' drugs needs medical advice on whether or not they can properly operate machines.



**CAUTION:** If any attachments used on this equipment have a separate Operator Manual, see that manual for other important safety information.



**FIG. 6**

## General Information

---

### WHEEL LIFT CYLINDER STOPS



**WARNING:** Install wheel lift cylinder stops in the storage positions when not in use.

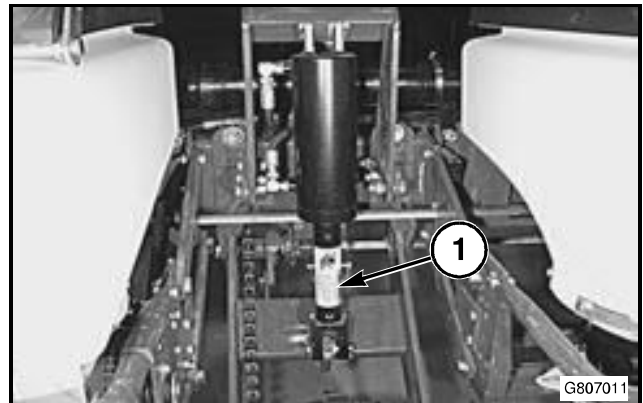


**WARNING:** To avoid walking under raised planter, wheel lift cylinder stops must be installed when planter is unfolded.



**WARNING:** Always install wheel lift cylinder stops when working under or around planter and when transporting planter.

**FIG. 7:** With the planter fully raised, install wheel lift cylinder stops (1) on wheel lift cylinders. Install pin through each wheel lift cylinder stop.



**FIG. 7**

**FIG. 8:** Wheel lift cylinder stops (1) in the storage position. Install pin through each wheel lift cylinder stop.



**FIG. 8**

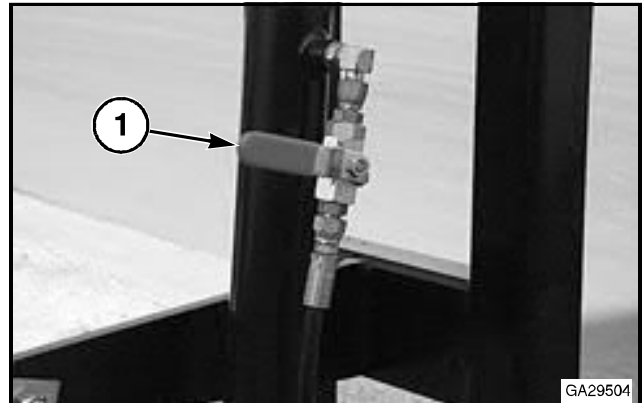
## MARKER LOCKUP VALVES



**WARNING:** Always lock up markers in raised and folded position when working around, storing or transporting planter.

**FIG. 9:** With markers fully raised, turn marker lockup valves to lockup (closed) position to stop fluid flow to marker lift cylinders.

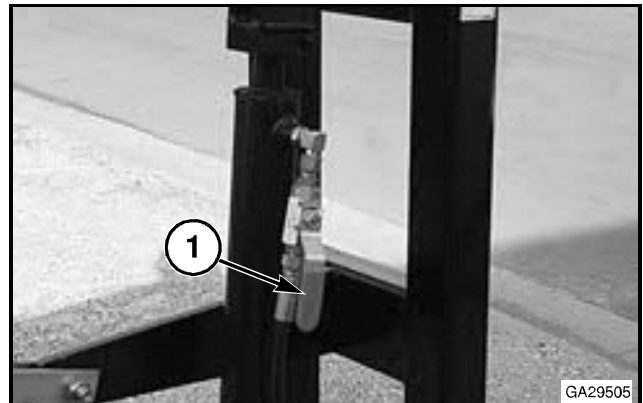
The marker lockup valve (1) is in the closed position.



**FIG. 9**

**FIG. 10:** To operate markers, turn marker lockout valves to operating (open) position.

The marker lockup valve (1) is in the open position.

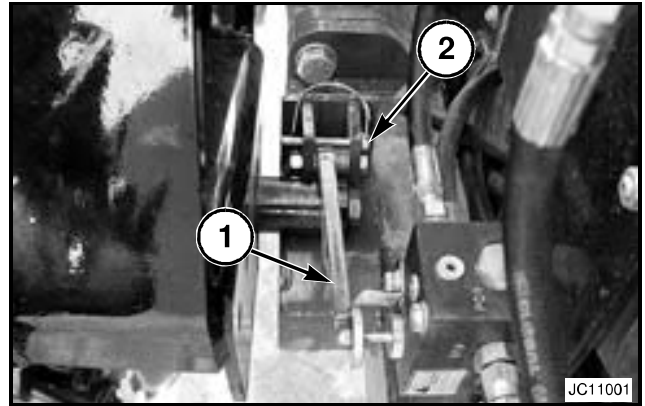


**FIG. 10**

## General Information

### WING LATCHES

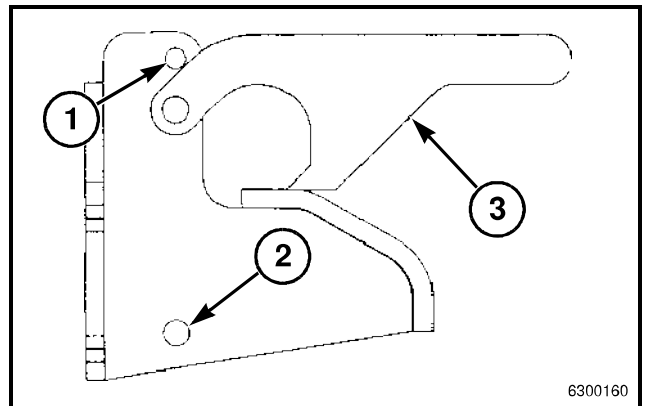
**FIG. 11:** When the planter wings are folded and latches (1) are engaged, install pins (2) to keep latches closed. When wings are unfolded, keep pins in storage holes.



**FIG. 11**

**FIG. 12:** Lock Pin Locations

- (1) Locked Position
- (2) Storage Position
- (3) Latch



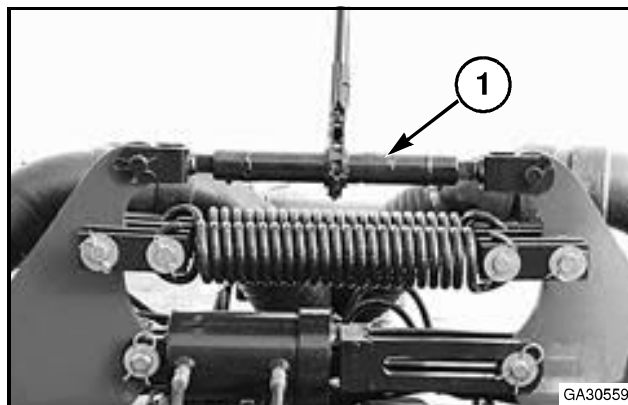
**FIG. 12**

### TOP LINK - FLEX FRAME



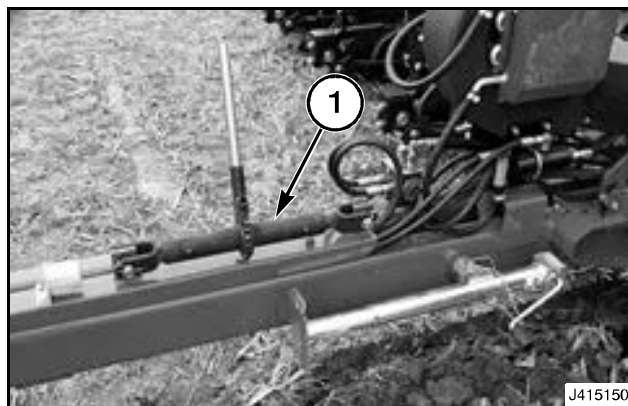
**WARNING:** Always install top link when servicing, storing, or transporting the planter.

**FIG. 13:** With the planter fully raised, install top link (1) with pins and pin clips.



**FIG. 13**

**FIG. 14:** During field operation, store top link (1) on hitch frame hose channel.



**FIG. 14**

# General Information

---

## SERVICING

### General Operation and Service

#### Operating

- Read and understand all the operating and safety precautions before operating the machinery.
- In addition to the equipment configuration and design, hazard control and accident prevention depend on awareness, concern, prudence and proper training of the personnel in the operation, maintenance, transport and storage of the equipment.
- Always raise the implement, shut off the tractor engine, set the brakes, shift to park position (or neutral) and install the cylinder lockup channels before working around the machine.
- Avoid working under the planter. However, if it becomes unavoidable to do so, make sure the planter is securely blocked and the cylinder lockup channels are in place.
- Do not attempt to lubricate or adjust the planter while the machine is in operation.
- The machinery operation must be performed only by persons who are responsible and delegated to do so.
- Only the operator must be permitted on the tractor (unless tractor has a factory-installed instructor seat) when the tractor and the planter are moving. Never permit anyone to ride on the planter.
- Avoid wearing loose-fitting clothing and jewelry. Always tie up long hair that can be caught in the moving parts.
- Wear personal protective equipment (PPE) such as, but not limited to, protection for eyes, lungs, ears, head, hands and feet when operating, servicing or repairing the equipment.
- Make sure all persons are clear before operating the tractor or machine.
- Do not leave the tractor or implement unattended with the engine running.
- Never attempt to operate the planter unless seated in the operator's seat on the tractor with the seat belt fastened.
- The tractor must be equipped with rollover protective structure (ROPS), and a seat belt. Use the seat belt during operation.
- Make sure the tractor is in good operating condition, and has adequate braking capabilities.
- Do not dismount from a moving tractor.
- Regulate the ground speed to field conditions, and maintain control at all times.
- When working around discs, be careful to not get cut on the sharp edges.
- Watch for overhead wires or other obstructions when raising markers, and when moving the planter with the marker(s) raised.
- Disconnect the planter. Store the planter where children do not normally play. Stabilize the planter by using suitable supports, and block the wheels.
- Always lower the planter when not in use and relieve pressure in the hoses and cylinders.
- Do not allow children to ride on, play on, or operate equipment. Always keep children away from the equipment operating, servicing, and storage areas.
- Do not stand between the tractor and planter to install the hitch pin when the tractor engine is running.

### Agricultural Chemicals

- Ag chemicals can be very hazardous. Improper use of fertilizer, fungicides, herbicides, insecticides and pesticides can injure people, plants, animals, soil and other people's property.
- Always read and follow all manufacturers' instructions before opening any chemical container.
- Even if you think you know them, read and follow instructions each time you use a chemical.
- Use same precautions when adjusting, servicing, cleaning or storing the planter as used when installing chemicals into the hoppers or tanks.
- Inform anyone who comes in contact with chemicals of the potential hazards involved and the safety precautions required.
- Stand upwind and away from the smoke from a chemical fire.
- Store or dispose of all unused chemicals only in a manner as specified by the chemical manufacturer.

### Transporting

- Do not transport planter in excess of 25 km/h (15 mph).
- Use a tractor with a minimum weight of at least 2/3 of the fully loaded planter.
- Use good judgment when transporting the planter on the highway. Maintain complete control of the machine at all times.
- Comply with the state and local laws governing highway safety and regulations when moving the machinery.
- Always make the necessary safety precautions prior to transporting the machine on public roads.
- Make sure SMV (Slow Moving Vehicle) emblem is clean and visible.
- Use flashing warning lights except when prohibited by law.
- Watch for overhead wires or other obstructions when transporting the planter with markers raised.
- Make sure the markers are completely folded before transporting or parking the planter.
- Install the transport cylinder lockup devices before transporting the planter.
- For Drawbar Hitch Models: Always fasten the transport safety chain to the tractor drawbar and use the retainer on the hitch pin.

## General Information

---

### Servicing

- Always raise the implement, shut off the tractor engine, and install cylinder lockup channels before working around the machine.
- After repairing or adjusting the planter, remove all of the tools and parts from the machine before operating the planter.
- Tire changing can be very hazardous and must be done by trained personnel using the proper tools and equipment.
- Do not inflate the tire that was seriously under-inflated or run flat. Have it checked by qualified personnel.
- Lower the planter to the ground before attempting to remove a wheel for tire repair.

#### FIG. 15: Fluid Leak Detection

- Correct the hydraulic leaks immediately. All the fittings must be tight and all the lines and hoses in good condition. Escaping hydraulic fluid, under extremely high pressure, can penetrate the skin and cause blood poisoning. Use a piece of wood or cardboard to detect fluid leaks. If injured by escaping fluid, see a doctor immediately.

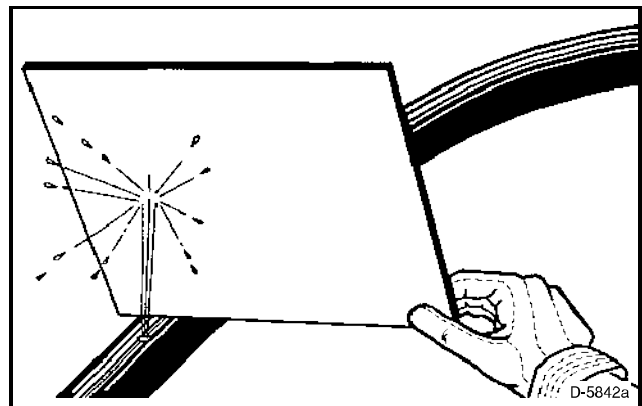


FIG. 15

## General Information

### Lubrication Chart

FIG.	ITEM	LUBE POINTS	8 HOURS (DAILY)	40 HOURS (WEEKLY)	BEGINNING OF SEASON	END OF SEASON
1	Parallel Arm Pivots	8 each Row Unit			O	O
2	H.D. Down Pressure Spring Pivots, Pins	4 each Row Unit			O	O
3	Frame Pivots	2 each		X	X	X
4	Flex Hitch Frame	10 each		X	X	X
5	Drive Clutches	2 each (5 places)	X		X	X
6	Depth Gauge Wheel Pivots	2 each row unit		X	X	X
6	Depth Gauge Wheel Adjuster Threads	1 each row Unit			X	X
7	Top Link (Flex Models)	2 each		X	X	X
8	Single-Disc Fertilizer Opener	3 each	X		X	X
9	Piston Fertilizer Pump	1	X		X	X
10, 11, 12	Markers*	10 each	X		X	X
	Piston Pump Crankcase	--			D	
14	Hydraulic PTO Pump	--	+		D	
15, 16	Hydraulic Filter	--			R	
--	Tillage Attachments	1 or 2 each	X		X	X
--	All Chains	--			^	^
+	Check, add fluid if necessary.					
X	Lubricate with pressure gun, using multi-purpose grease					
O	Lubricate with a few drops of light oil.					
D	Drain and replace with recommended fluid.					
R	Replace with genuine original equipment filter.					
^	Lubricate with chain and gear lube.					

*NOTE: All wheel, shaft and disc bearings are permanently lubricated and sealed for life.*

\* Lubricate twice daily if planting relatively short rows and using markers frequently.



**Suggest:**

**For more complete manuals. Please go to the home page.**

**<https://www.ebooklibonline.com>**

**If the above button click is invalid. Please download this document first, and then click the above link to download the complete manual.**

**Thank you so much for reading**

## General Information

### Lubrication Points

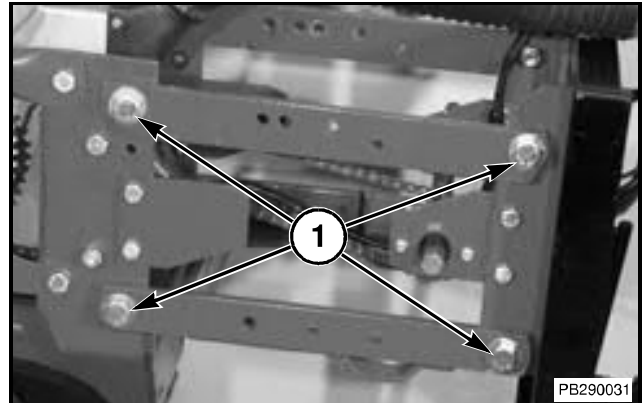
Refer to the chart on the previous page for the appropriate lubrication interval.

*NOTE: All arrows point to the grease fittings unless otherwise noted.*

*IMPORTANT: All grease fittings must be free of dirt and paint to make sure entry of lubricant inside bearings. Replace all missing fittings. Force the lubricant through each bearing or pivot until the lubricant comes out of the bearing.*

**FIG. 16:** Row Unit

Parallel Arm Pivots, oil both sides (1) (Beginning and End of Season)

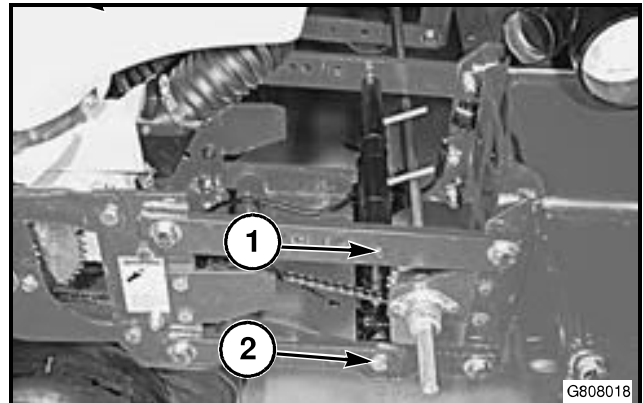


**FIG. 16**

**FIG. 17:** Heavy-Duty Down Pressure Springs

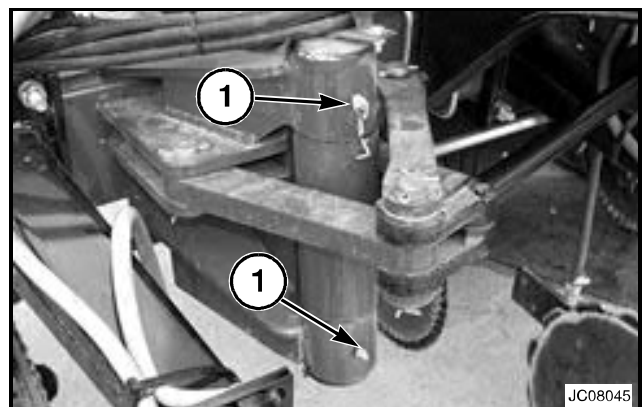
Locking Pin, oil - both sides (1), (Beginning and End of Season)

Support Pivot, oil - both sides (2), (Beginning and End of Season)



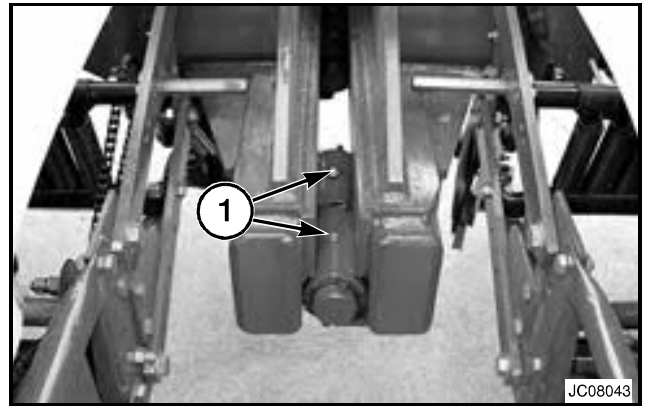
**FIG. 17**

**FIG. 18:** Frame Pivots (1), (40 hours)



**FIG. 18**

**FIG. 19:** Flex Hitch Frame Pivots (1), (40 hours)

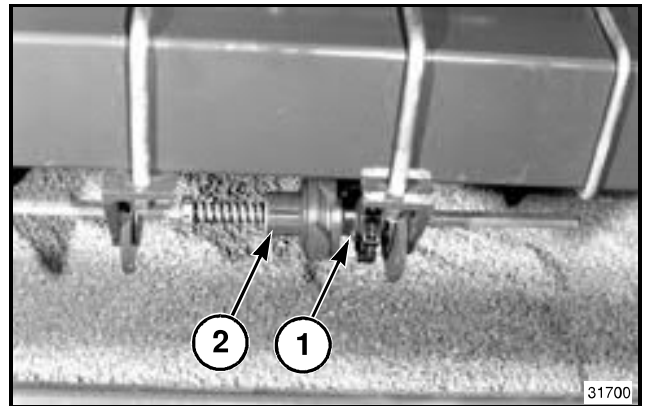


**FIG. 19**

**FIG. 20:** Drive Clutches

One grease fitting (1) on the hub. (8 hours)

One grease fitting (2) on the clutch. (8 hours)

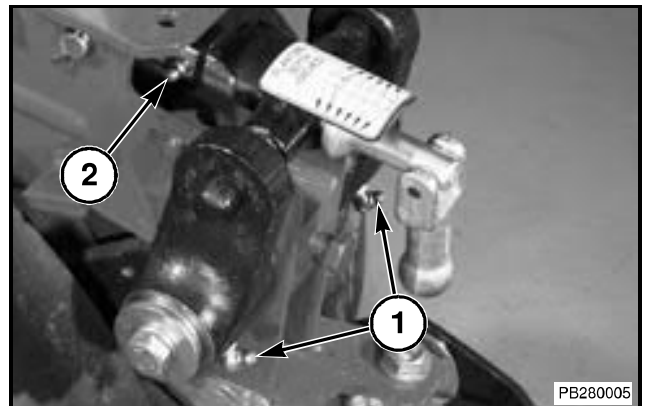


**FIG. 20**

**FIG. 21:** Rear of Row Unit

Depth Gauge Wheel Pivots (1), (40 hours)

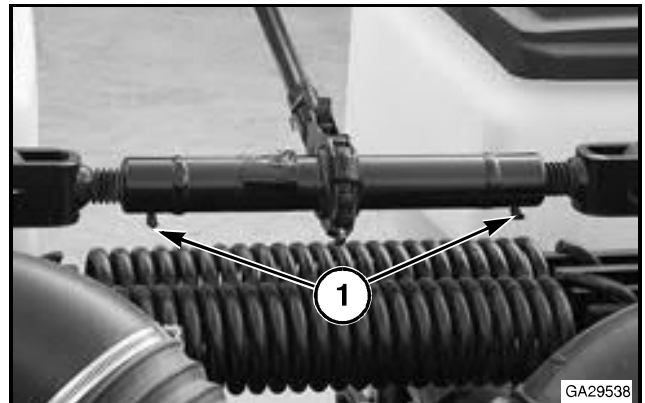
Depth Gauge Adjuster Threads (2), (Beginning and End of Season)



**FIG. 21**

**FIG. 22:** Top Link (Flex Models)

Two grease fittings (1) on the top link. (40 hours)



**FIG. 22**

**<https://www.ebooklibonline.com>**

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

**<https://www.ebooklibonline.com>**