

# Massey Ferguson®

9936  
Planter

## SERVICE MANUAL 4283533M1

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# Massey Ferguson®

## 9936 Planter

### SERVICE MANUAL 4283533M1

## 01 - General Information

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# GENERAL INFORMATION

## GENERAL

Model 9936 30-Row, 9936 22-Row, 9936 20-Row Forward Fold Planter with Central Fill System.

9900 Series Forward Fold Planters are designed, built and tested to make sure high quality, maximum strength and long service life. This machine features positive air metering and hydraulic seed drive for accurate seed spacing.

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



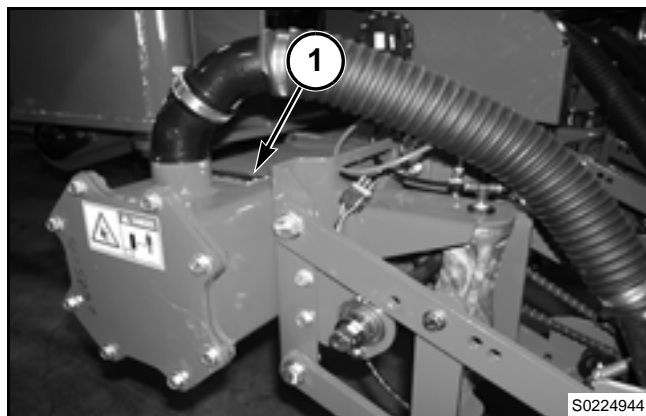
**WARNING: Pictures in this manual can show protective shields and guards opened or removed for illustration purposes. MAKE SURE ALL SHIELDS AND GUARDS ARE IN PLACE DURING OPERATION.**

This manual must remain with machine when sold.

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.

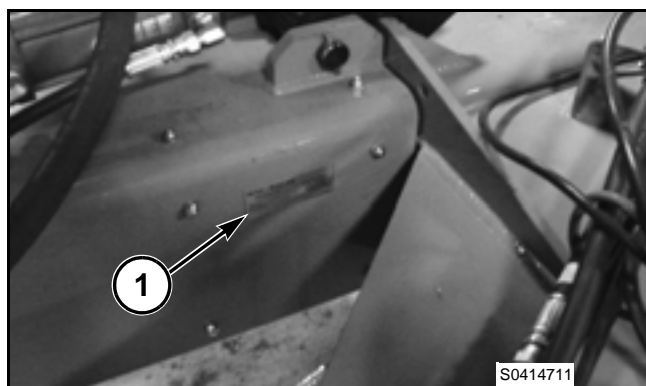
## SERIAL NUMBER PLATE LOCATION

**FIG. 1:** Row unit toolbar: The serial number plate (1) is located on the left-hand row unit toolbar of the center section.



**FIG. 1**

**FIG. 2:** Frame: The serial number plate (1) is located on the right-hand side of the main tongue.



**FIG. 2**

## General Information

### SERIAL NUMBER DEFINITION (2010 AND UP)

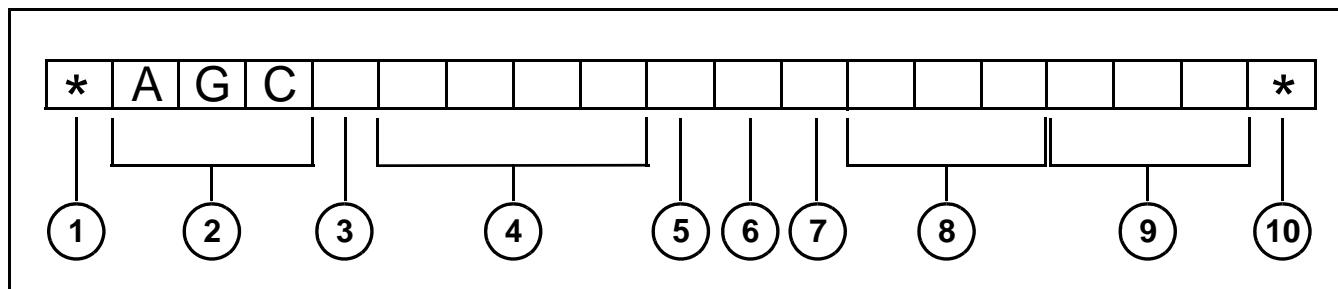


FIG. 3

**FIG. 3:** Definition 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.*

### MACHINE IDENTIFICATION

*NOTE: Always quote the serial number in any communication to your Dealer.*

Machine Model No.: \_\_\_\_\_

Machine Serial No.: \_\_\_\_\_

Date of Delivery: \_\_\_\_\_

Dealer Name and Address: \_\_\_\_\_

\_\_\_\_\_

Dealer's Telephone No.: \_\_\_\_\_

Dealer's Fax No.: \_\_\_\_\_

### **INTENDED USE**

This machine is designed solely for use in customary agricultural operations.

Do not use this machine for any application or purpose other than those described in this manual. The manufacturer accepts no liability for damage or injury resulting from misuse of this machine.

Compliance with the conditions of operation, service and repair as specified by the manufacturer constitute essential elements for the intended use of this machine.

This machine should be operated, serviced and repaired only by qualified persons familiar with its characteristics and familiar with the relevant safety rules and procedures.

All generally recognized safety regulations and road traffic regulations must be obeyed at all times.

Any unauthorized modifications performed on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

### **PROPER DISPOSAL OF WASTE**

Improper disposal of waste can pollute the environment and ecology. A few examples of potentially harmful waste from AGCO equipment include, but not limited to, items such as oil, fuel, coolant, brake fluid, filters, battery chemicals, tires, etc.

Use leak proof containers when draining fluids. Do not use food or beverage containers to collect waste fluids, as food or beverage container(s) may mislead someone into drinking from them.

Do not pour or spill waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire with local environmental or recycling center on the proper way to recycle or dispose waste.



**NOTES**

# SAFETY

## SAFETY ALERT SYMBOL

**FIG. 1:** 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.

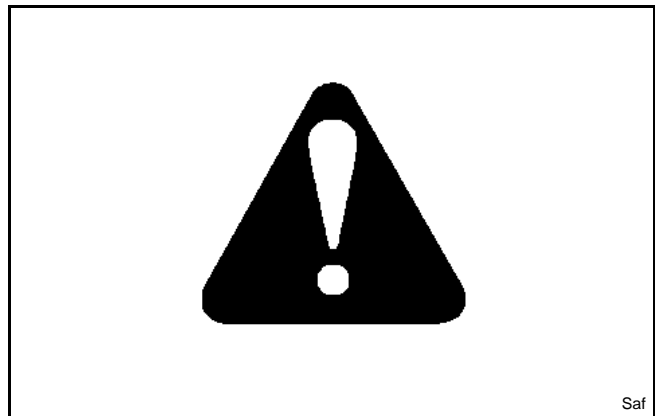




FIG. 1

## SAFETY MESSAGES

**FIG. 2:** 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. 2

## 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

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## SAFETY SIGNS



**WARNING: DO NOT remove or obscure Danger, Warning or Caution signs. Replace any Danger, Warning or Caution 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.**

Keep signs clean by wiping off regularly. Use a cleaning solution if necessary.

If parts have been replaced or a used machine has been purchased, make sure all safety signs are in the correct location and can be read. Illustrations of safety sign locations are located at the rear of this section.

Replace any safety signs that can not be read or are missing. Clean the machine surface thoroughly with a cleaning solution before replacing signs. Replacement safety signs are available from your dealer.

## A WORD TO THE OPERATOR

**FIG. 3:** 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.

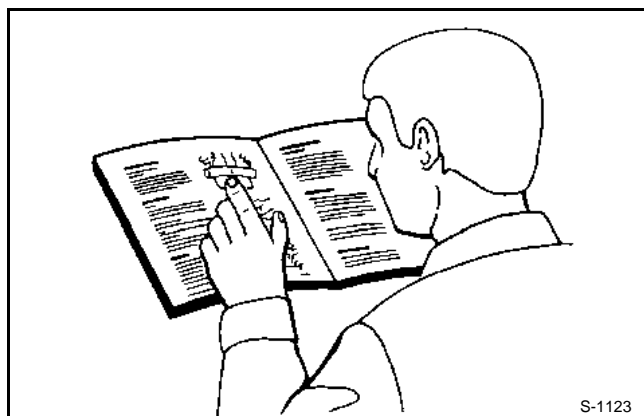
Personal injury or death may result if these precautions are not followed.

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.



**FIG. 3**

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.

## SERVICE MANUAL

This manual covers general safety practices for this machine. The Service Manual must always be kept with the machine.

Right-hand and left-hand, as used in this manual, are determined by facing the direction the machine will travel when in use.

The photos, illustrations, and data used in this manual were current at the time of printing, but due to possible in-line production changes, your machine can vary slightly in detail. The manufacturer reserves the right to redesign and change the machine as necessary without notification.



**WARNING:** In some of the illustrations and photos used in this manual, shields or guards may have been removed for clarity. Never operate the machine with any shields or guards removed. If the removal of shields or guards is necessary to make a repair, they **MUST** be replaced before operation.

# Safety

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## PREPARE FOR OPERATION

Read and understand all operating instructions and precautions in this manual before operating or servicing the machine.

Make sure you know and understand the positions and operations of all controls. Make certain all controls are in neutral and the parking brake is applied before starting the machine.

Make certain all people are well away from your area of work before starting and operating the machine. Check and learn all controls in an area clear of people and obstacles before starting your work. Be aware of the machine size and have enough space available to allow for operation. Never operate the machine at high speeds in crowded places.

Emphasize the importance of using correct procedures when working around and operating the machine. Do not let children or unqualified persons operate the machine. Keep others, especially children, away from your area of work. Do not permit others to ride on the machine.

Make sure the machine is in the proper operating condition as stated in the Operator Manual. Make sure the machine has the correct equipment required by local regulations.

All equipment has a limit. Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine and the tractor before you start.

## OPERATION

### General Information

**FIG. 4:** When parking, park the machine and the tractor on a solid level surface. Put all controls in neutral, put the tractor transmission in PARK, and apply the tractor parking brake. Stop the tractor engine and take the key with you.

Make sure the tractor and implement are in the proper operating condition according to the operators manuals. Make sure the tractor brakes and the machine brakes, if equipped, are adjusted correctly.

The tractor must have enough weight and braking capacity, especially when operating on roads and terrain that is not even. Use a tractor of recommended size and weight to tow the machine. See Specifications for the minimum tractor size and weight.

Tractor must be equipped with rollover protective structure (ROPS), and a seat belt. Use seat belt during operation.

Do not dismount from moving machinery.

Always operate the machine with the control console turned on.

Never start the tractor with PTO engaged or control console turned on.

Where possible avoid operating the planter near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slippery, or muddy surfaces.

Stay off slopes too steep for operation.

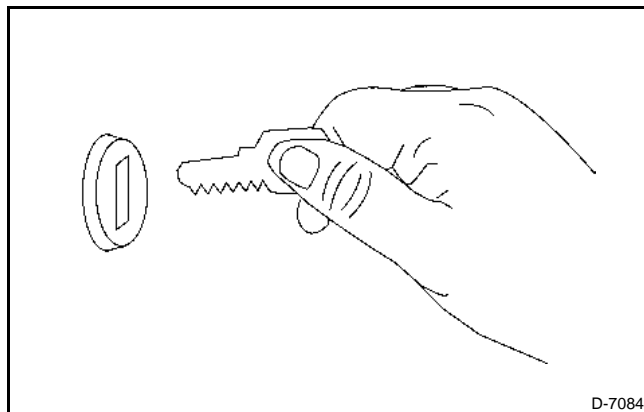
Be aware of the size of the equipment and have enough space available to allow for operation.

Watch for overhead wires or other obstructions when raising markers, and when moving the planter with the marker(s) raised.

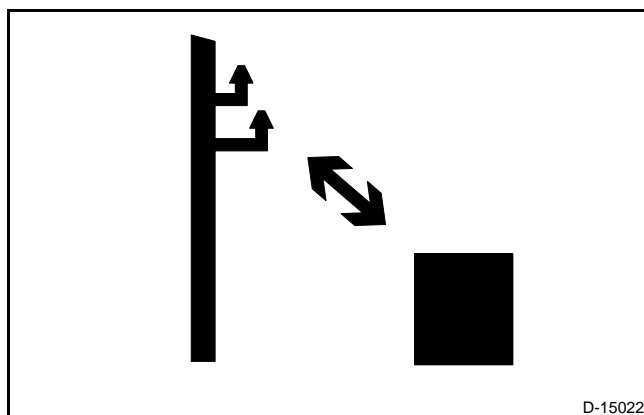
Always lower the planter when not in use and relieve the pressure in hoses and cylinders.

Do not stand between the tractor and the implement to install the hitch pin when the tractor engine is running.

**FIG. 5:** Avoid contact with electrical power lines. Contact with electrical power lines can cause electrical shock, resulting in very serious injury or death.



**FIG. 4**



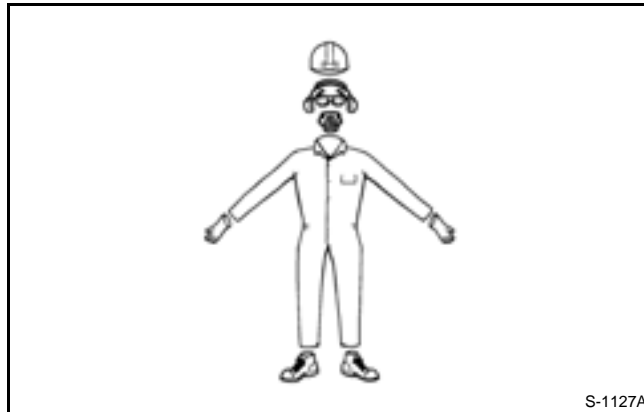
**FIG. 5**

# Safety

## PPE (Personal Protection Equipment)

**FIG. 6:** Wear all personal protective equipment (PPE) and protective clothing issued to you or called for by job conditions and country/local regulations. PPE includes, but is not limited to, equipment to protect eyes, lungs, ears, head, hands and feet when operating, servicing or repairing equipment.

Always keep hands, feet, hair, and clothing away from moving parts. Do not wear loose clothing, jewelry, watches, or other items that could entangle in moving parts. Tie up long hair that can also entangle in moving parts.



**FIG. 6**

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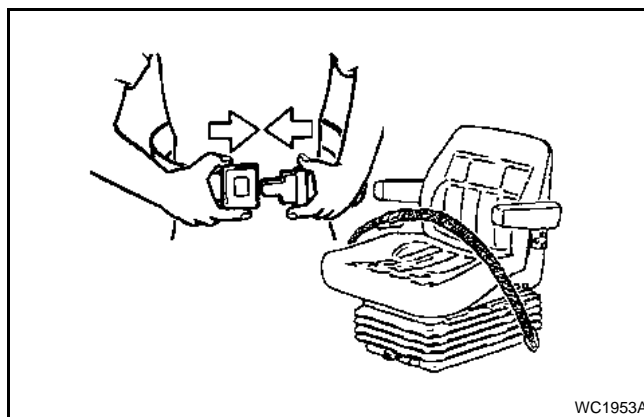
## Seat Instructions

Securely fasten the seat belt before operating the machine. Always remain seated and have the seat belt fastened while operating the machine. Replace the seat belts when they become worn or broken.

Never wear a seat belt loosely or with slack in the belt system. Never wear the seat belt in a twisted condition or pinched between the seat structural members.

When using the instructional seat, if equipped, securely fasten the seat belt. The instructional seat is to be used only to train new operators or diagnose a problem. The instructional seat is only intended for short periods of use. Extra riders, especially children, are not permitted on the machine.

When the instructional seat is used the machine must be driven at a slower speed and on level ground. Avoid quick starts, stops, and sharp turns. Avoid driving on highways or public roads.



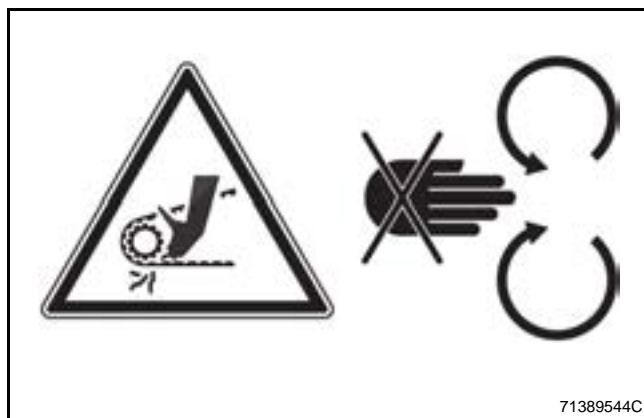
**FIG. 7**

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## Shield and Guards

**FIG. 8:** All shields and guards must be in the correct operating position and in good condition.

Do not open, remove, or reach around shields while the engine is operating. Entanglement in rotating belts and components can cause serious injury or death. Stay clear of rotating components.

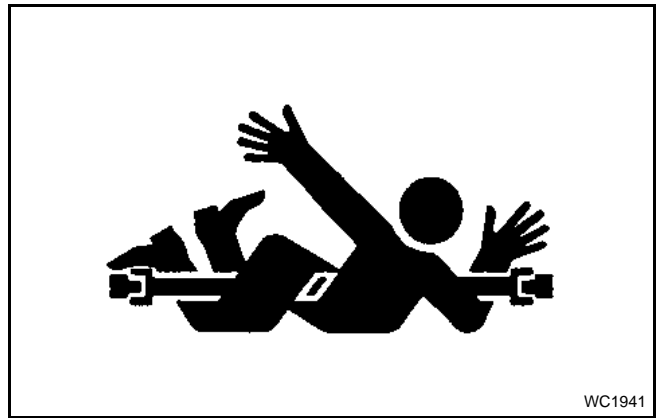


**FIG. 8**

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**FIG. 9:** Do not operate the machine with the drive shaft shields open or removed. Entanglement in rotating drive shafts can cause serious injury or death. Stay clear of rotating components.

Make sure rotating guards turn freely.

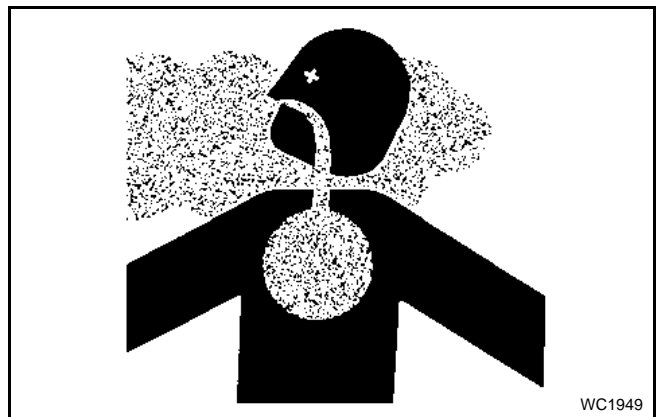


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**FIG. 9**

## Exhaust Warning

**FIG. 10:** Never operate the engine in a closed building unless the exhaust is vented outside.

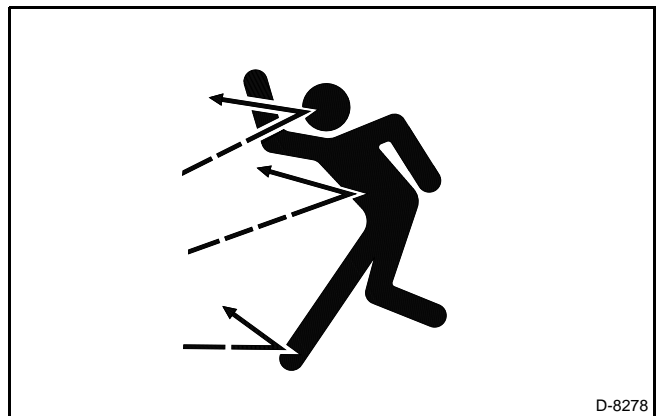


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**FIG. 10**

## Flying Debris

**FIG. 11:** Never stand near the machine during operation. Debris can be thrown from the machine during operation possibly resulting in injury.



D-8278

**FIG. 11**



# Safety

## Agricultural Chemicals

Agricultural 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 the instructions, read and follow instructions each time you use a chemical.

Use the same precautions when adjusting, servicing, cleaning or storing the machine 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 smoke from a chemical fire.

Store or dispose of all unused chemicals only in a manner as specified by the chemical manufacturer.

## TRAVEL ON PUBLIC ROADS

**FIG. 12:** Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine and the tractor before you travel on public roads.

Use good judgment when traveling on public roads. Maintain complete control of the machine at all times. Never coast down hills.

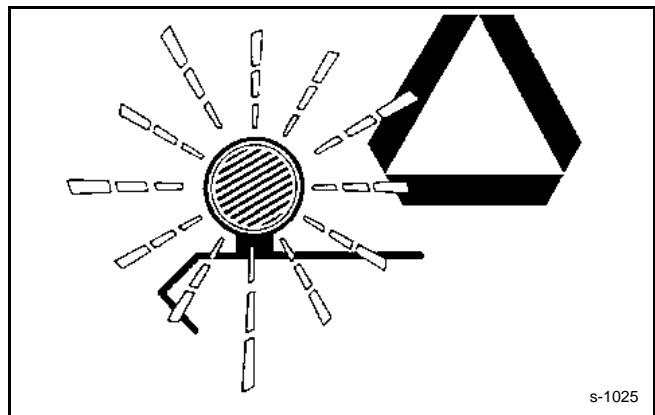
The maximum speed of farm equipment is governed by local regulations. Adjust travel speed to maintain control at all times. See Specifications for the maximum speed for this machine.

Make sure the tractor is in the proper operating condition according to the tractor operator manual. Make sure the tractor brakes and the machine brakes, if equipped, are adjusted correctly. The tractor must have enough weight and braking capacity, especially when operating on roads and terrain that is not even. To achieve proper braking capacity, use tractor of recommended size and weight to tow the machine. See Specifications for the minimum tractor weight.

Familiarize yourself with and obey all road regulations that apply to your machine. Consult your local law enforcement agency for local regulations regarding movement of farm equipment on public roads. Use headlights, flashing warning lights, taillights and turn signals, day and night, unless prohibited by local law.

Make sure all the flashers are operating prior to driving on the road. Make sure reflectors are correctly installed, in good condition, and wiped clean. Make sure the Slow Moving Vehicle (SMV) emblem is clean, visible, and correctly mounted on the rear of the machine.

Be aware of other traffic on the road. Keep well over to your own side of the road and pull over, whenever possible, to let faster traffic pass.



**FIG. 12**

Be aware of the overall width, length, height, and weight of the equipment. Be careful when transporting the machine on narrow roads and across narrow bridges.

Always install the safety transport chain between the implement and the tractor drawbar.

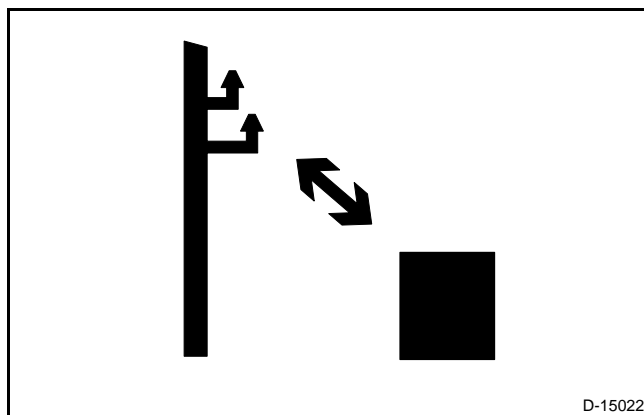
- Use a safety transport chain with a strength rating equal to or more than the gross weight of the towed machines.
- Connect the safety transport chain to the tractor drawbar and use a retainer on the hitch pin.
- Supply only enough slack in the safety transport chain to permit turning.
- Do not use the safety transport chain as a tow chain for towing.

Install marker lockup pins before transporting or parking planter.

Install wheel cylinder lockup channels before transporting or parking planter.

Vertical Fold Models: Always install wing lockup pins before transporting or parking planter.

**FIG. 13:** Watch for overhead wires and other obstructions. Avoid contact with electrical power lines. Contact with electrical power lines can cause electrical shock, resulting in very serious injury or death.



**FIG. 13**

# Safety

## MAINTENANCE

### General Information

**FIG. 14:** Before doing any unplugging, lubricating, servicing, cleaning, or adjusting:

- Park the machine on a solid level surface.
- Disengage the tractor PTO.
- Put the tractor transmission in PARK and apply the tractor parking brake.
- Turn off the control console.
- Stop the tractor engine and take the key with you.
- Look and Listen! Make sure all moving parts have stopped.
- Put blocks in front of and behind the wheels of the machine and the tractor before working on or under the machine.

Do not leave tractor or implement unattended with the engine running.

Do not pull crop, twine, or any other object from the machine while the tractor engine is running. Moving parts can pull you in faster than you can move away.

Do not attempt to service or adjust the machine until all moving parts have stopped.

Check all nuts and bolts periodically for tightness, especially wheel mounting hardware.

After unplugging, lubricating, servicing, cleaning, or adjusting the machine make sure all tools and equipment have been removed.

Make sure electrical connectors are clean and free of dirt or grease before connecting.

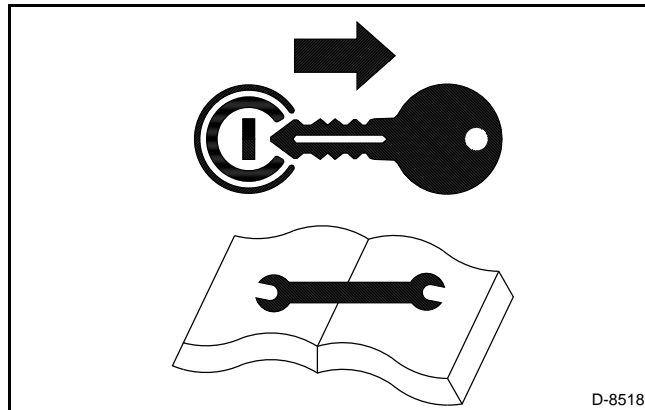
Check for loose, broken, missing, or damaged parts. Make sure the planter is in good repair. Make sure all guards and shields are in position.

Be aware of the size of parts when doing service work. Never stand under or near a part being moved with lifting equipment.

Always raise implement, shut off tractor engine, apply the parking brake, shift to park position (or neutral) remove the key and install the cylinder stops channels before working around the machine.

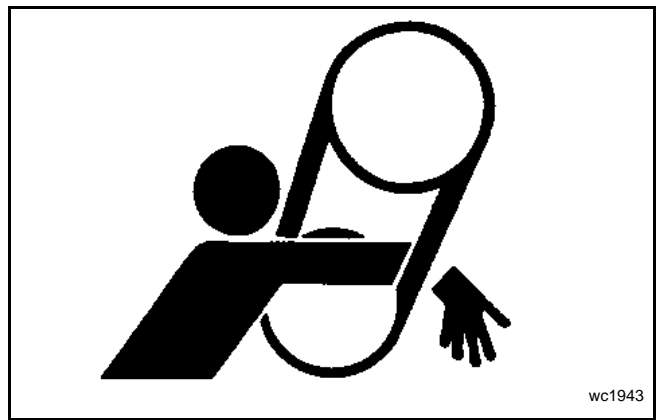
Avoid working under the planter. However, if it becomes unavoidable to do so, make sure the planter is securely blocked and the cylinder lockup channels are in place.

When working around discs, be careful to not get cut on sharp edges.



**FIG. 14**

**FIG. 15:** Never service, check or adjust the drive chains or belts while the tractor engine is running.



**FIG. 15**

**FIG. 16:** Do not operate the machine with the drive shafts shields open or removed. Entanglement in rotating drive shafts can cause serious injury or death.

Stay clear of rotating components.

Never start the tractor with the PTO engaged.

Make sure rotating guards turn freely.

A loose yoke can slip off the tractor PTO shaft and result in injury to persons or damage to the machine.

When installing a quick disconnect yoke, the spring activated locking pins must slide freely and be seated in the groove on the PTO shaft.

Pull on the implement driveline to make sure the quick disconnect yoke cannot be pulled off the PTO shaft.



**FIG. 16**

### Fire Prevention and First Aid

**FIG. 17:** Be prepared for emergencies.

Keep a first aid kit handy for treatment of minor cuts and scratches.

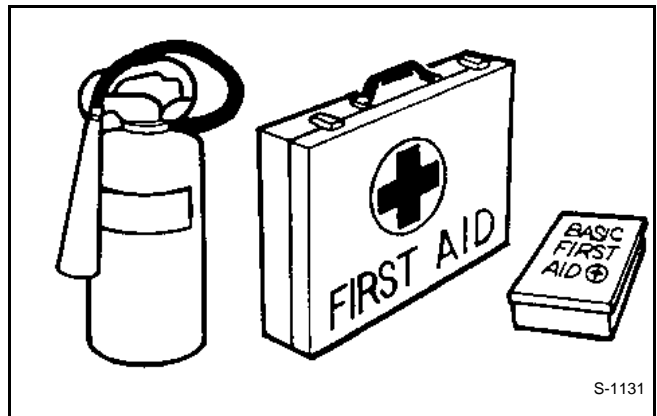
Always carry one or more fire extinguishers of the correct type. Check fire extinguishers regularly as instructed by the manufacturer. Make sure fire extinguishers are properly charged and in operating condition.

Due to the nature of the crops this machine will operate in, the risk of fire is of concern. Use a water type fire extinguisher or other water source for a fire in crop.

For fires involving anything other than crop, such as oil or electrical components, use a dry chemical fire extinguisher with an ABC rating.

Mount fire extinguishers within easy reach of where fires can occur.

Frequently remove accumulated crop material from the machine and check for overheated components. Check the machine daily for any noises that are not normal. Such noises could indicate a failed component that can cause excess heat.

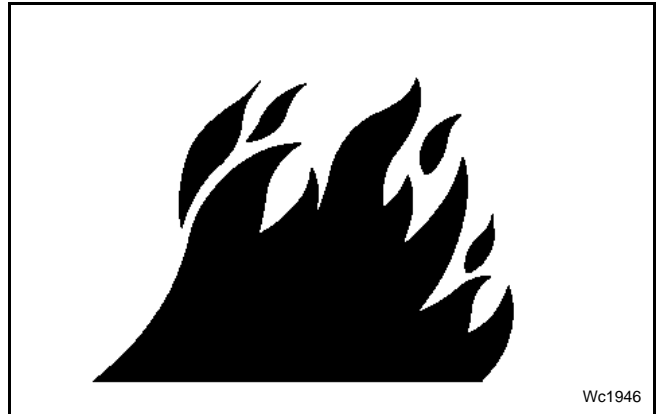


**FIG. 17**

## Safety

If any flame cutting, welding, or arc welding is to be done on the machine or attachments, make sure to clear any crop material or debris from around the area. Make sure the area below the work area is clear of any flammable material as falling molten metal or sparks can ignite the material.

**FIG. 18:** If fire occurs stand upwind and away from smoke from the fire.

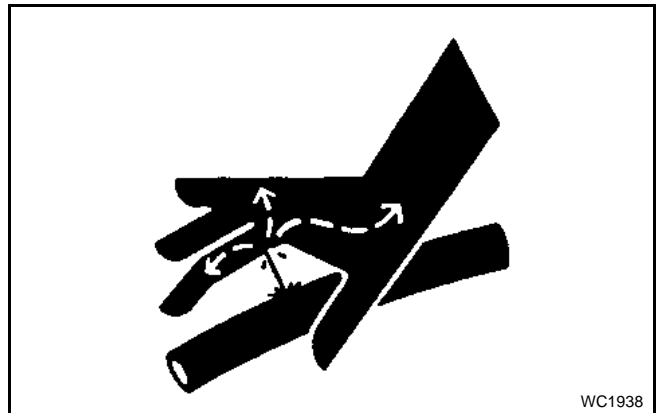


**FIG. 18**

### Checking for High Pressure Leaks

**FIG. 19:** Fluid leaking from the hydraulic system or the fuel injection system under high pressure can be very hard to see. The fluid can go into the skin causing serious injury.

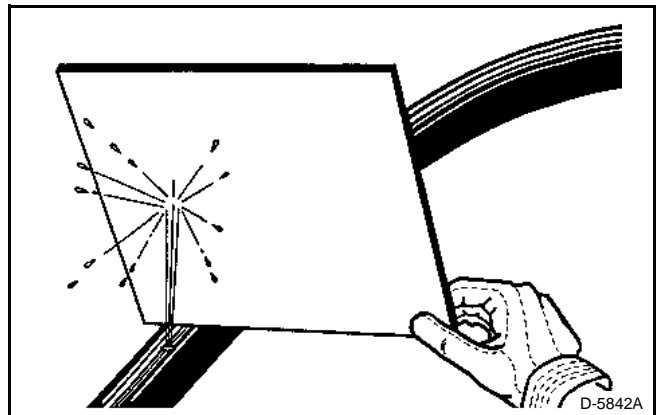
Fluid injected into the skin must be surgically removed within a few hours. If not removed immediately, serious infection or reaction can develop. Go immediately to a doctor who knows about this type of injury.



**FIG. 19**

**FIG. 20:** Use a piece of cardboard or wood to search for possible leaks. Do not use your bare hand. Wear leather gloves for hand protection and safety goggles for eye protection.

Relieve all pressure before loosening any hydraulic lines. Relieve the pressure by lowering raised equipment, shutting off accumulator valve, if equipped, and shutting off the engine. Tighten all connections securely before applying pressure.



**FIG. 20**

## Tire Safety

**FIG. 21:** Check tires for cuts, bulges, and correct pressure. Replace worn or damaged tires. When tire service is needed, have a qualified tire mechanic service the tire. Tire changing can be very hazardous and must be done by qualified tire mechanic using proper tools and equipment. See the Specifications Section for the correct tire size.

Tire explosion and/or serious injury can result from over inflation. Do not exceed the tire inflation pressures. See the Specifications Section for the correct tire pressure.

Do not inflate a tire that is seriously under inflated or has been run flat. Have the tire checked by qualified tire mechanic.

Do not weld on the rim when a tire is installed. Welding will make an air/gas mixture that can cause an explosion and burn with high temperatures. This danger applies to all tires, inflated or deflated. Removing air or breaking the bead is not enough. The tire must be completely removed from the rim prior to welding.

Lower planter to the ground before attempting to remove a wheel for tire repair.



**FIG. 21**

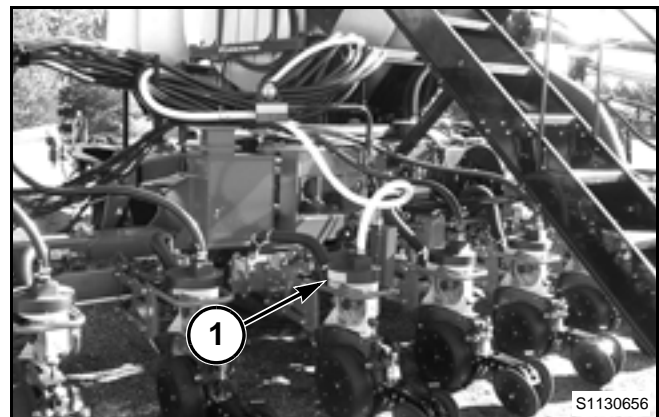
## REFLECTORS

### Center Section

**FIG. 22:** Outer Rows, Center Section

(1) Yellow reflector

*NOTE: Reflectors same locations on both sides of planter.*



**FIG. 22**

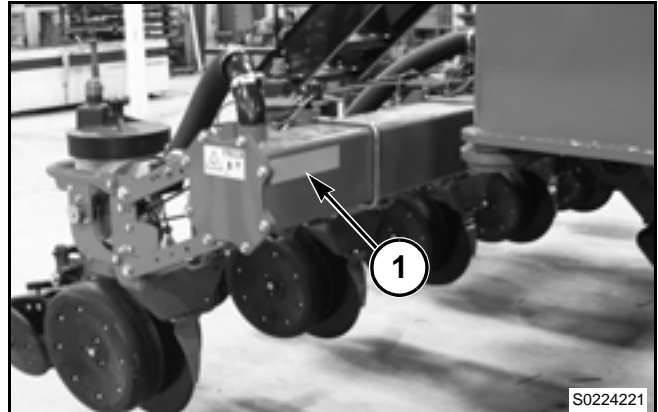
# Safety

## Wing Sections

**FIG. 23:** Yellow reflector

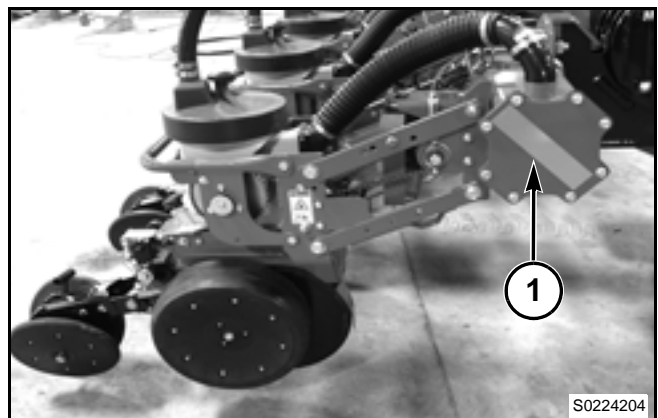
A yellow reflector on the front outer side of each center section.

*NOTE: Reflectors same locations on both sides of planter.*



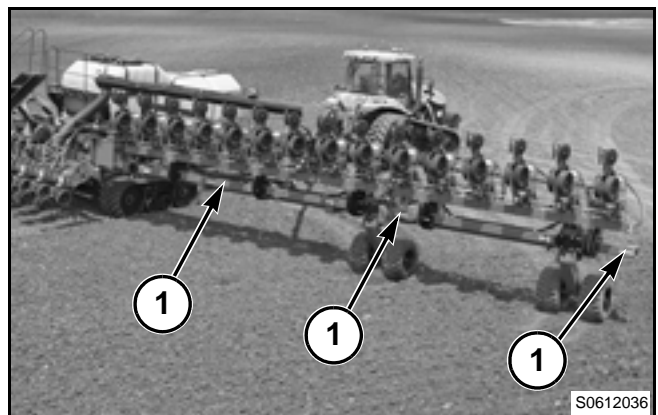
**FIG. 23**

**FIG. 24:** Outer left-hand and right-hand row units, yellow reflector (1).



**FIG. 24**

**FIG. 25:** The wings, on both sides, yellow reflector (1).



**FIG. 25**

# SPECIFICATIONS

## FRAME

Main Frame (Toolbar) Size .....	17.5 x 17.5 cm (7 x 7 in)
Secondary Frame Size .....	7.6 x 17.8 cm (7 x 7 in)
Flexibility	
9936-30 .....	+/- 42 degrees over total frame width
9936-20 .....	+/- 21 degrees over total frame width
9936-22 .....	+/- 21 degrees over total frame width
Fold Cylinders	
9936-30 .....	Four, 5 x 30 inch double acting
9936-20 .....	Two, 5 x 30 inch double acting
9936-22 .....	Two, 5 x 30 inch double acting
Wheel Lift Cylinders	
9936-30 .....	Eight phasing double acting
9936-20 .....	Six phasing double acting
9936-22 .....	Six phasing double acting
Latch Cylinder .....	One, 2-1/2 x 5 inch double acting
Shaft and Disc Bearings .....	Permanently sealed and lubricated for life

## TIRES AND WHEELS

Tires	
9936-30 .....	Eight, 16.5 x 12, 12 ply
9936-20 .....	Four, 16.5 x 12, 12 ply
9936-22 .....	Four, 16.5 x 12, 12 ply
Tire Pressure (max.) .....	482 kPa (50 psi) or maximum indicated on sidewall
Wheel Bearings .....	Tapered roller

## TRACKS

Wheel Stud Diameter	
1/2 inch diameter .....	80 +/- 10 lb ft
5/8 inch diameter .....	160 +/- 10 lb ft
Air Bag Tensioner	
Air bag .....	3.44 bar +/- .34 (50 psi +/-5)

## 9936-30

Rows .....	36
Row Spacing .....	76.2 cm (30 in)
Transport Width .....	4.6 m (15 ft)
Transport Length .....	16.8 m (55 ft)
Transport Height .....	3.9 m (12 ft 8 in)



## Specifications

---

Operating Length.....	11 m (36 ft)
Operating Width.....	27.4 m (90 ft)
Tracks.....	2

### 9936-20

Rows.....	36
Row Spacing.....	50.8 cm (20 in)
Transport Width.....	4.6 m (15 ft)
Transport Length.....	11.6 m (38 ft)
Transport Height.....	3.9 m (12 ft 8 in)
Operating Length.....	8.5 m (28 ft)
Operating Width.....	18.3 m (60 ft)
Tracks.....	2

### 9936-22

Rows.....	36
Row Spacing.....	55.8 cm (22 in)
Transport Width.....	4.6 m (15 ft)
Transport Length.....	11.6 m (38 ft)
Transport Height.....	3.9 m (12 ft 8 in)
Operating Length.....	8.5 m (28 ft)
Operating Width.....	20 m (66 ft)
Tracks.....	2

## ROW UNITS

Seed Hoppers.....	Two 2643 liter (75 bu) central fill hoppers
Seed Discs.....	Corn, soybean, sunflower, sugar beet, cotton, sorghum, milo, .....maize, navy bean, large edible bean, snap bean, peanut
Seed Drive System.....	Electronically-controlled hydraulically
Seed Disc-to-Metering Unit Clearance.....	0.254 to 1.27 mm (0.010 to 0.050 in)
Herbicide/Insecticide Hoppers.....	70 lb per row
Metering Unit Drives.....	Sprocket, chain and shaft w/ hydraulic motor
Gauge Wheel Tire Size.....	11.4 x 40.6 cm (4.5 x 16 in)
Single Closing Wheel Tire Size.....	10.3 x 30.1 cm (4 x 12 in)
Dual Closing Wheel Tire Size.....	30.8 cm dia (12 in dia)
Single Closing Wheel Down Pressure.....	4.5 to 50.0 kg (10 to 130 lb)
Dual Closing Wheel Down Pressure.....	6.8 to 107 kg (50 to 230 lb)

## AIR SYSTEM

Seed Meter Blowers	
9936-30.....	5
9936-22.....	3
9936-20.....	3

## Specifications

---

Max. Blower Speed .....	2600 rpm @ rated PTO rpm
Operating Air Pressure (Min).....	12.7 mm (0.5 in) of water
Operating Air Pressure (Max) .....	102 mm (4 in) of water

### HYDRAULIC SYSTEM

Tractor Remote Valve Requirements .....	Four
Frame Lift - Fold System Capacity .....	95 liter (25 gal)

#### Blower Motor

Fluid Requirement (Max).....	30.2 to 60.6 Lpm (8 to 16 gpm)
Operating Pressure (Min).....	3445 kPa (500 psi) @ rated PTO rpm
Operating Pressure (Max) .....	17,238 kPa (2500 psi*) @ rated PTO rpm

\* Maintained by relief valve in planter proportional flow divider valve block.

### HYDRAULIC FLOW REQUIREMENTS

Total minimum flow required utilizing tractor remotes gpm .....	208 Lpm (55 gpm)
Hydraulic seed drive (3 motors) and Seed metering blowers (3) gpm .....	79 Lpm (21 gpm)
Lift system gpm.....	76 Lpm (20 gpm)
CFS blower gpm.....	61 Lpm (16 gpm)
Frame fold gpm.....	76 Lpm (20 gpm)
Hydraulic jack gpm .....	19 Lpm (5 gpm)

### ELECTRONIC SEED DRIVE CONTROLLER

#### ISOBUS Planter Controller

Voltage .....	12 VDC, w/ nonvolatile memory
Monitoring Capability .....	Row population, high/low population limits, areas (3), distance counter, ..... seed spacing, seed count, acres/hour, ground speed
Program Capability .....	Seed Population, seed spacing

### APPROXIMATE SHIPPING WEIGHTS

9936-30 with row units.....	23814 kg (52500 lb)
9936-20 with row units.....	18144 kg (40000 lb)
9936-22 with row units.....	18234 kg (40200 lb)

# Specifications

---

## TRACTOR RECOMMENDATION

### Recommended Tractor Horsepower

Horsepower..... 400 hp

#### Minimum tractor weight

9936-30 inch ..... 13608 kg (30000 lb)

9936-20 inch ..... 8738 kg (19263 lb)

9936-22 inch ..... 8738 kg (19263 lb)

#### Planter Dry Weight

9936-30 inch ..... 23814 kg (52500 lb)

9936-20 inch ..... 18144 kg (40000 lb)

9936-22 inch ..... 18234kg (40200 lb)

#### Planter Total Weight

9936-30 inch ..... 27216 kg (60000 lb)

9936-20 inch ..... 21546 kg (47500 lb)

9936-22 inch ..... 21636 kg (47700 lb)

## MAXIMUM SPEED

Maximum Rounding Speed..... 25 km/hr (15 mi/hr)

*IMPORTANT: Do not exceed the maximum legal speeds  
for this planter on public roads.*

---

# FIELD OPERATIONS AND ADJUSTMENTS

## TRACTOR PREPARATION

### General

Before operating the planter, refer to your tractor Operator Manual for specific operating information about the hydraulics, tire inflation, hitching, weights and wheel adjustments.

### Recommended Tractor Horsepower

See the Specifications Section.

### Lubrication

Lubricate the tractor as described in the tractor's operator manual.

### Wheels

Dual tractor rear wheels are recommended for use with this model of planter.

### Wheel Spacing

Set all wheels equally from the tractor centerline.

When operating on hillsides or steep slopes, set the wheels as wide as possible for maximum stability and steering control. If the front axle is adjustable, set the wheels at the outside edge of the inner rear wheels.

### Tire Inflation

Inflate tires as recommended in tractor operator's manual.

### Remote Hydraulic Valve Requirements

Four valves are required.

1. One valve controls the frame lift/lower-central fill circuit.
2. A second valve controls the hydraulic drive/singulation fan circuit.
3. A third valve controls the fold circuit.
4. A fourth valve controls the hydraulic hitch jack.

A minimum available tractor system pressure must be 15,502 kPa (2250 psi).

### Tractor Drawbar

Adjust the tractor drawbar to between 45 cm (18 in) and 55 cm (22 in) off the ground.

*IMPORTANT: Drawbar must be in shortest possible position.*

*IMPORTANT: Tractor must be equipped with heavy duty drawbar option from the tractor manufacturer.*

# Field Operations and Adjustments

---

## Front Weights

*IMPORTANT: Weight recommendations provide for adequate transport stability at recommended speeds. Additional front weights may be required for satisfactory field operation due to sudden or extreme forces on the Folding Toolbar. These forces may occur when removing the folding toolbar from the ground and turning at rows end, or during field transport over very rough ground.*

The tractor front end stability is necessary for efficient operation. It is important that the proper amount of weight be installed on the front of the tractor as recommended in your tractor operator's manual.

## Electrical Requirements

The tractor electrical system must provide 12 volts DC to operate the seed monitor console, electro-hydraulic control console, and optional highway lighting.

## Air Clutches for Swath Control

If equipped with GPS: Install the GPS according to the GPS manufacturer's instructions.

If equipped with a manual control box: Mount the control box in a suitable location in the cab.

## PLANTER PREPARATION

### Lubrication

Lubricate the planter as described in the Lubrication and Maintenance Section.

### Wheel Bolts

The wheel bolts must be checked for tightness before using and again after one day of use. Check periodically to be sure the wheel bolts are tight.

### Bolt Torque

Tighten all bolts according to the chart at the end of the Lubrication and Maintenance Section.

Make sure all bolts, nuts, and screws are tight and all cotter pins are spread.

### Tire Inflation

See the Specifications section for the correct tire pressure.

### Track Wheel Lug Nuts

Check and torque all wheel lug nuts. See the Specification Section for the torque settings.

### Track Air Bag Tensioner Inflation

See the Specifications section for the correct track air pressure.

## Chains

Make sure all drive chains are installed with the proper tension, alignment, and lubrication.

## Seed Discs

Install the correct seed discs in all of the metering units.

Adjust the seed gates as needed.

## Hydraulic Seeding Monitor

If necessary, install the ISOBUS planter controller console in a suitable cab location. Connect the input leads of the monitor to the 12V DC battery terminals.

*NOTE: The ISOBUS planter console does not have to be mounted on the level to operate properly.*

For convenience:

- Mount the implement switch on the lever controlling the planter raise-lower hydraulic circuit.

*NOTE: The dealer will have installed all electrical controls in the tractor cab.*

Route the output wire harnesses to the rear of the tractor.

Program the ISOBUS planter console for the crop to be planted. Make sure the radar device is in the correct position.

See the ISOBUS Planter Electronics section for more information.

*IMPORTANT: Connect all of the consoles to 12-volt DC system only.*

## CONNECTING THE PLANTER TO THE TRACTOR

The planter must be on a level surface.

Back the tractor toward the planter hitch.

**FIG. 1:** When the hitches are aligned, install a hitch pin (1) with a minimum diameter of 51 mm (2 in). Install a pin clip.

Install the transport safety chain (2) around the tractor drawbar and connect the hook (3) to the chain.

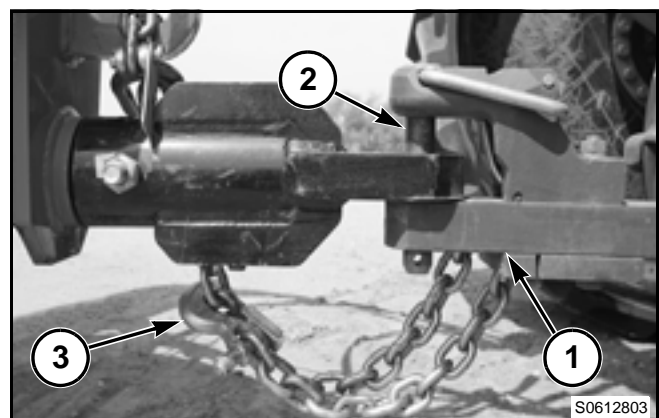
Connect the ISOBUS planter controller harness to the mating console harness.



**WARNING: Stop tractor engine and remove key and shift to park or shift to neutral and set brakes before dismounting.**

*IMPORTANT: Clean off the hose ends and tractor couplers to remove the dirt before making connections.*

Follow the tractor manual procedure to relieve internal system hydraulic pressure, then connect the planter hydraulic hoses to the tractor remote outlets.



**FIG. 1**

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