

Massey Ferguson®

Model 9220 / 9420 / 5230 / 5240 / 5260 Windrower

WORKSHOP SERVICE MANUAL 700724371 A Rev.

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GENERAL INFORMATION

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TO OUR CUSTOMER

We appreciate your confidence in our farm equipment and thank you for your patronage. In preparing this manual, we hope we have furnished you with a valuable tool for operating and maintaining this fine machine. Use this manual as your guide. Practicing the instructions given here will result in many years of dependable service from your machine.

Your Dealer can give you assistance with parts and specially trained personnel to assist you in repair and maintenance. Call your Dealer if you need any assistance or information.

INTRODUCTION

This service manual has been prepared with the latest service information available at the time of publication. Read the service manual carefully before doing any service on the machine.

Right-hand and left-hand, as used in this manual, is 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 production changes, your machine can vary slightly. The Manufacturer reserves the right to redesign and change the machine as necessary without notification.



WARNING: Some pictures in this manual show the machine with shields removed to allow for a better view of the subject of the picture. Never operate the machine with any of the shields removed.

PAGE NUMBERS

All page numbers are made of two numbers separated by a dash, such as 4010-9.

The number before the dash is the section number.

The number following the dash is the page number in that section.

The page number will be at the lower right-hand or lower left-hand corner of each page.

UNITS OF MEASUREMENT

Measurements are given in metric units of measurement followed by the equivalent in U.S. units. Hardware sizes are given in millimeters for metric hardware and inches for U.S. hardware.

General Information

REPLACEMENT PARTS

To receive prompt efficient service, always remember to give the dealer the following information:

- Correct part description or part number.
- Model number of your machine.
- Serial number of your machine.

SERIAL NUMBER PLATE LOCATION

FIG. 1: The serial number plate (1) is located on the left-hand side of the side panel.

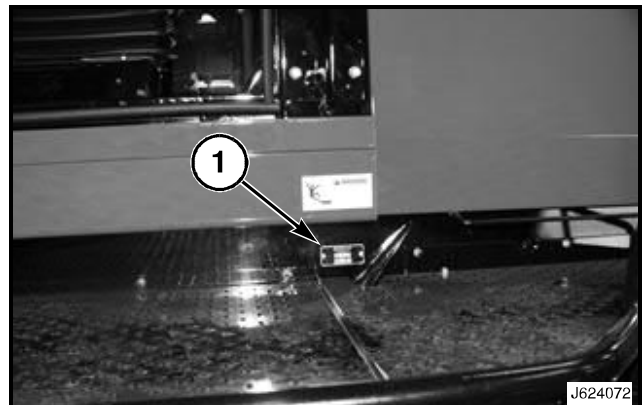


FIG. 1

COMPONENT LOCATION (9260 / SP185B / 5260)

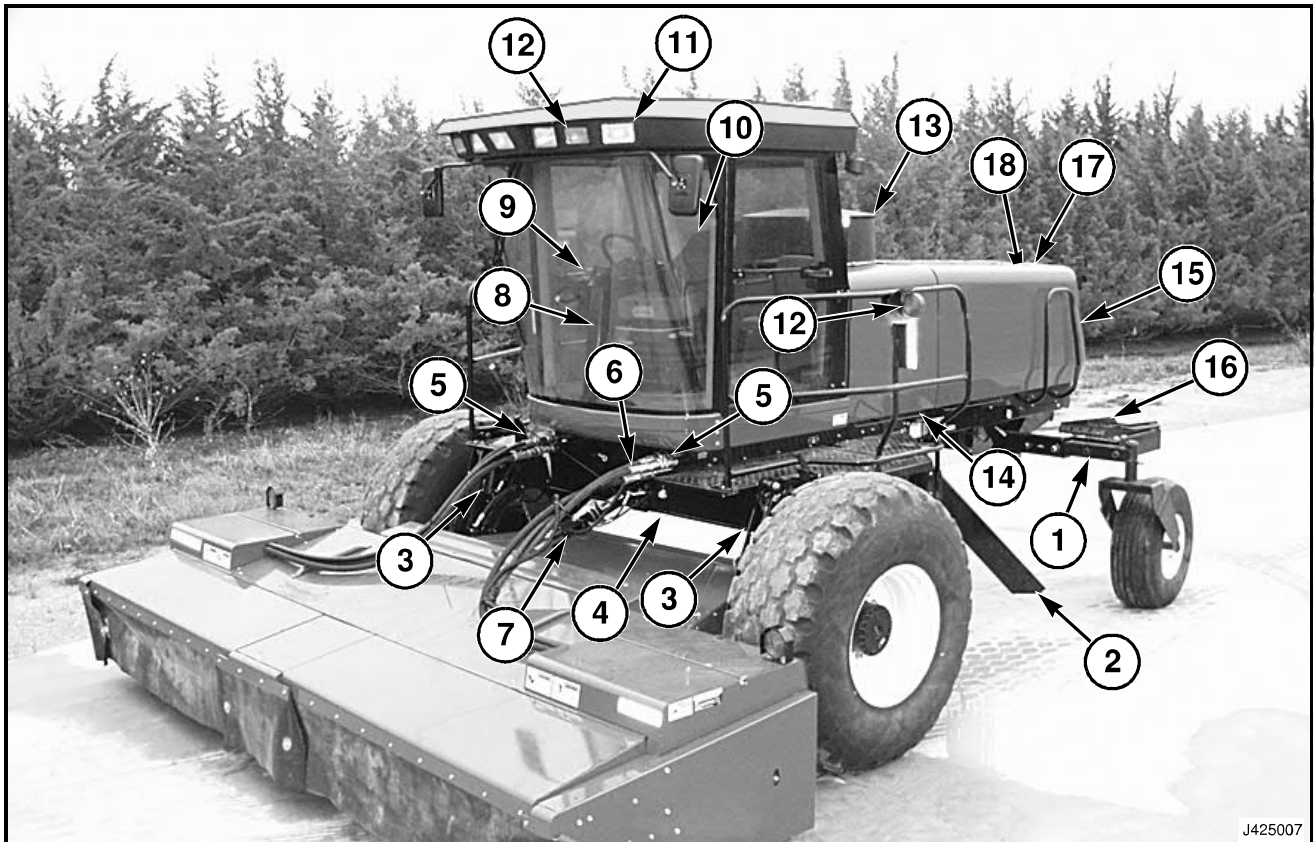


FIG. 2

FIG. 2: Front Left-hand View

- | | |
|---|--|
| (1) Walking Beam | (10) Operator's Seat |
| (2) Platform Steps | (11) Work Lamps |
| (3) Header Lift Linkages | (12) Amber Flashing Warning Lamps |
| (4) Hydraulic Accumulator | (13) Rotary Screen |
| (5) Hydraulic Connections | (14) Radiator Compartment Door |
| (6) Electrical Connections | (15) Engine Hood |
| (7) Header Angle Cylinder | (16) Fuel Fill Access Steps and Platform |
| (8) Adjustable Tilt and Pivot Steering Column | (17) Fuel Fill Location |
| (9) Control Console | (18) Hydraulic Oil Fill Location |

General Information

COMPONENT LOCATION (9240 / 9230 / SP115B / SP85B / 5240 / 5230)

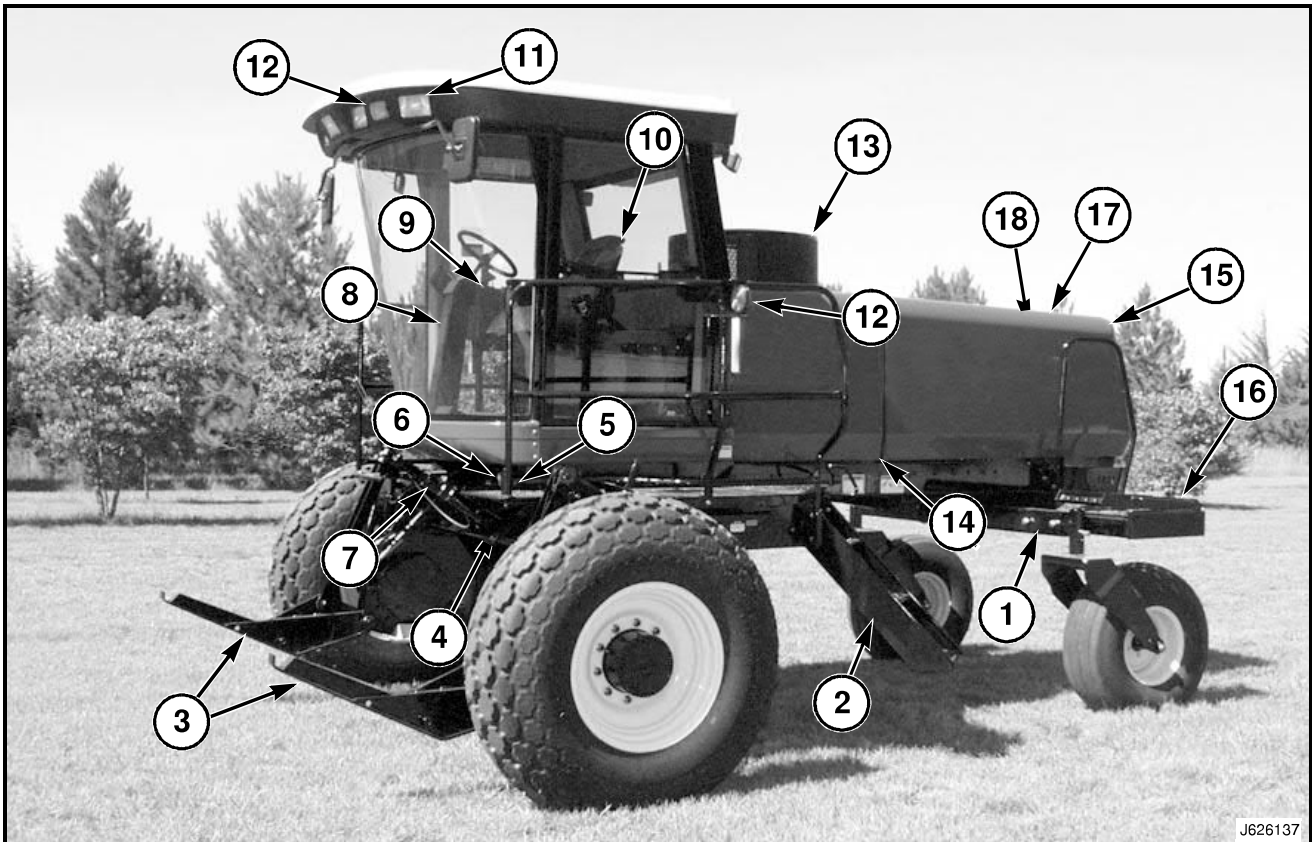


FIG. 3

FIG. 3: Front Left-hand View

- | | |
|---|--|
| (1) Adjustable Tailwheel Walking Beam | (10) Operator's Seat |
| (2) Platform Steps | (11) Work Lamps |
| (3) Header Lift Arms | (12) Amber Flashing Warning Lamps |
| (4) Hydraulic Accumulator | (13) Rotary or Stationary Screen |
| (5) Hydraulic Connections | (14) Radiator Compartment Door |
| (6) Electrical Connections | (15) Engine Hood |
| (7) Header Angle Cylinder | (16) Fuel Fill Access Steps and Platform |
| (8) Adjustable Tilt and Pivot Steering Column | (17) Fuel Fill Location |
| (9) Control Console | (18) Hydraulic Oil Fill Location |

COMPONENT LOCATION (9220 / 9420)

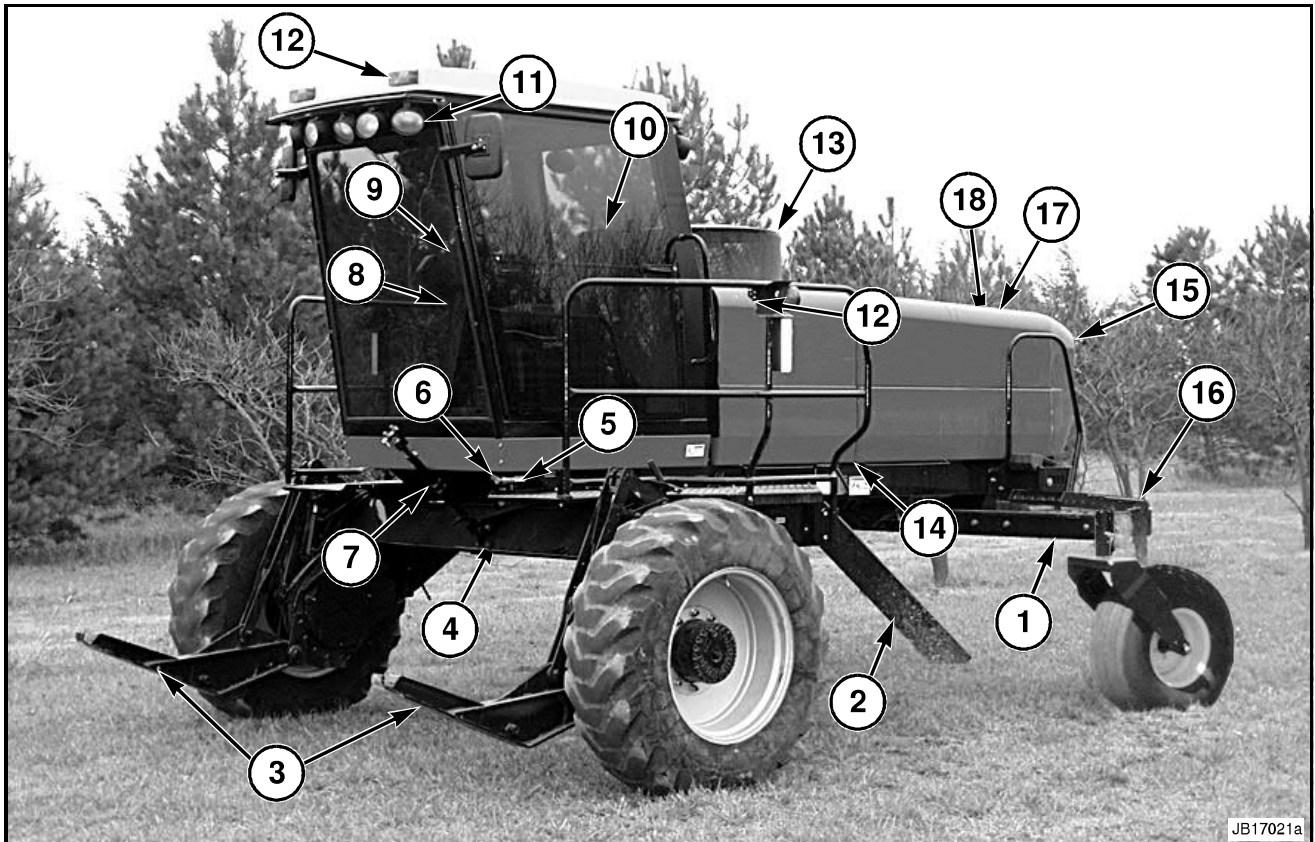


FIG. 4

FIG. 4: Front Left-hand View

- | | |
|---|--|
| (1) Adjustable Tailwheel Walking Beam | (10) Operator's Seat |
| (2) Platform Steps | (11) Work Lamps |
| (3) Header Lift Arms | (12) Amber Flashing Warning Lamps |
| (4) Hydraulic Accumulator | (13) Rotary or Stationary Screen |
| (5) Hydraulic Connections | (14) Radiator Compartment Door |
| (6) Electrical Connections | (15) Engine Hood |
| (7) Header Angle Cylinder | (16) Fuel Fill Access Steps and Platform |
| (8) Adjustable Tilt and Pivot Steering Column | (17) Fuel Fill Location |
| (9) Control Console | (18) Hydraulic Oil Fill Location |

General Information

COMPONENT ACCESS

Engine Compartment

FIG. 5: The engine hood can be raised to the first latch position by pulling down on the front release handle (1). The front release handle is located inside the left-hand frame rail by the front engine support channel.



FIG. 5

FIG. 6: The engine hood can be raised to the second latch position by pulling down on the rear release handle (1). The rear release handle is located on top of the left-hand frame rail by the hydraulic reservoir.

To close the engine hood from either latch position, pull the rear release handle and lower the engine hood. Make sure the engine hood lowers completely and the closing latch is engaged.

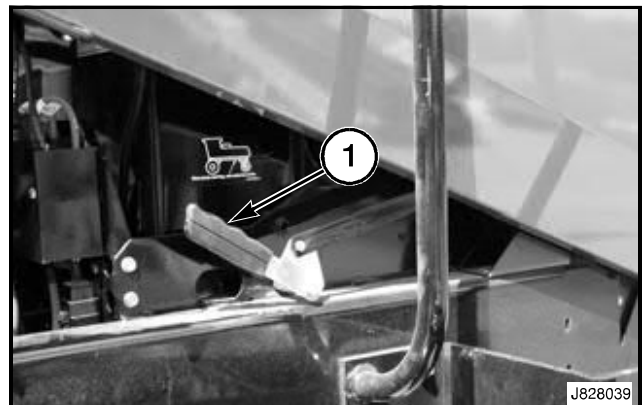


FIG. 6

Radiator Compartment

FIG. 7: The radiator compartment can be opened from both the left-hand and right-hand sides. To open the radiator compartment doors (1), pull the door handle and raise the door until completely open.

The oil cooler and air conditioner cores can be pulled out for better access. Remove the hairpin (2) at the upper left-hand corner of the core mounting frame and pull on the core assembly handle (3).

To put the core assembly in the operating position, push the core assembly all the way into the radiator compartment. Install the hairpin.

To close the radiator compartment doors, pull down on the door handle until the door is completely closed.

IMPORTANT: The radiator compartment is not to be used to store supplies or tools.

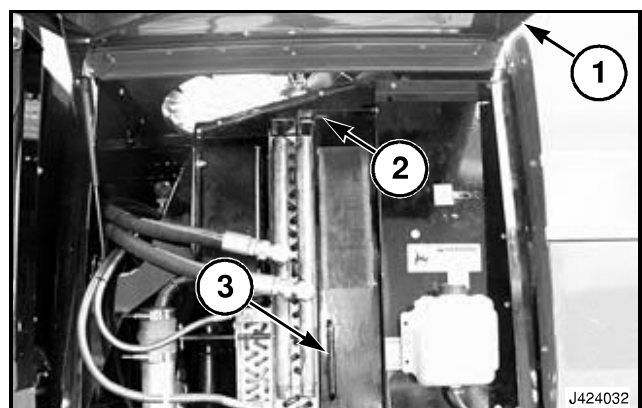


FIG. 7

Control Console

FIG. 8: To open the control console, pull up on the edge of the cover near the ball studs (1). The ball studs will release from the clips (2). Do not remove the screws (3) fastening the ball studs to the cover.

NOTE: Some force is required to pull the ball studs out of the clips. If necessary, use a flat screwdriver to carefully lift the cover up near the ball studs.

To close the control console, put the cover in position with the ball studs in the clips. Push down on the cover above the ball studs until the ball studs are fully engaged into the clips.

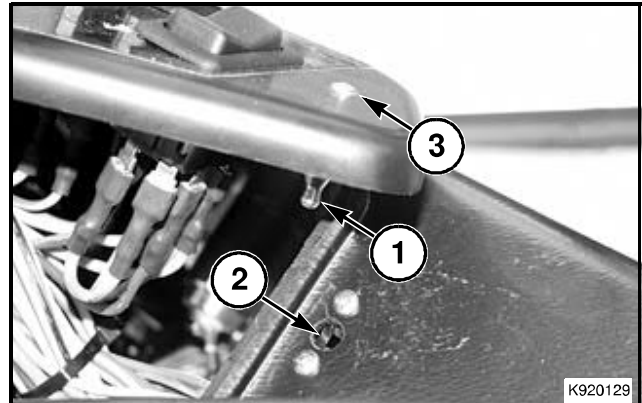


FIG. 8

Under the Cab

FIG. 9: To access the steering linkage and the electrical connections under the cab, the front shield (1) can be removed. To remove the front shield, remove the hardware (2) on each end of the front shield. Remove the front shield.

To install the front shield, put the shield in position with the bottom edge in the channels (3) on each end of the front shield. Install the hardware removed earlier.

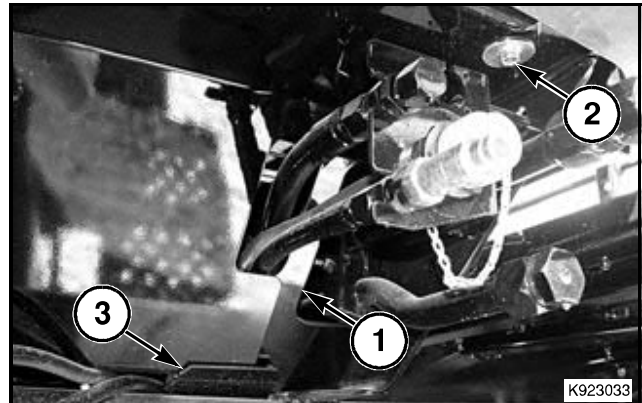


FIG. 9

General Information

Header Drive Pump (9230 / 9240 / 9260 / SP85B / SP115B / SP185B / 5230 / 5240 / 5260)

FIG. 10: To get more access to the header drive pump, the rear panel (1) can be removed. Disconnect the wiring harness (2) from each of the lamps mounted on the rear panel. Remove the four bolts (3) fastening the rear panel to the machine.

To install the rear panel, put the rear panel in position on the machine. Install the four bolts removed earlier. Connect the wiring harness to each of the lamps mounted on the rear panel.

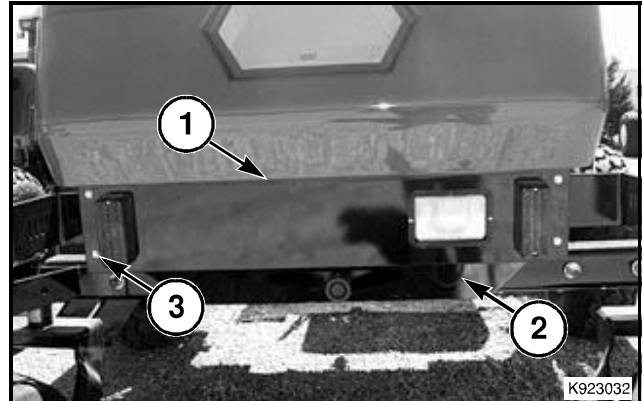


FIG. 10

Header Drive Pump (9220 / 9420)

FIG. 11: To get more access to the header drive pump, the rear panel (1) can be removed. Disconnect the wiring harness from each of the lamps (2) mounted on the rear panel. Remove the four bolts (3) fastening the rear panel to the machine.

To install the rear panel, put the rear panel in position on the machine. Install the four bolts removed earlier. Connect the wiring harness to each of the lamps mounted on the rear panel.

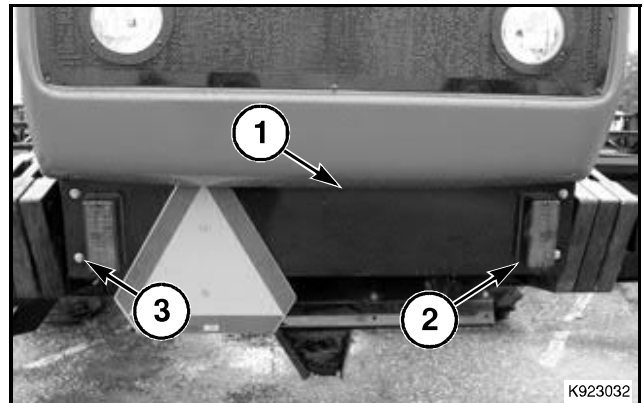


FIG. 11

Cab Roof (9230 / 9240 / 9260 / SP85B / SP115B / SP185B / 5230 / 5240 / 5260)

The cab roof pivots on two hinges for access to the air conditioner, heater, windshield wiper motor (if installed), and lighting.

IMPORTANT: Do not open cab roof cap where wind can catch cab roof cap and cause damage.

FIG. 12: To lift the cab roof, remove the eight washer head machine screws (1) that fastens the cab roof to the headliner. From the inside of the cab, remove two front rod assemblies (2) and two shorter rear rod assemblies (3). The two shorter rear rod assemblies are under the door seal.

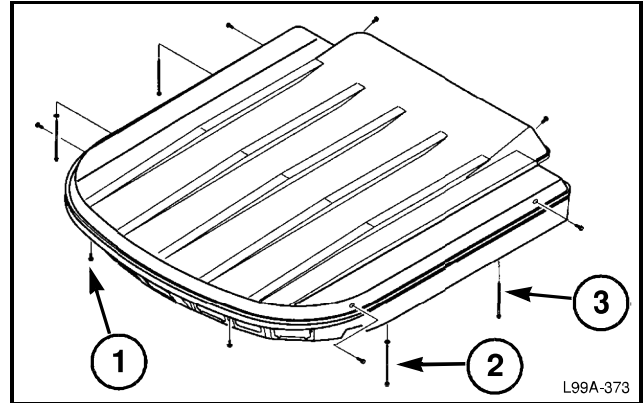


FIG. 12

FIG. 13: Lift the right-hand side of the cab roof from inside the cab and pivot the hinge assemblies outward.

- (1) Cab roof hinge in the closed position.
- (2) Cab roof hinge in the open position.

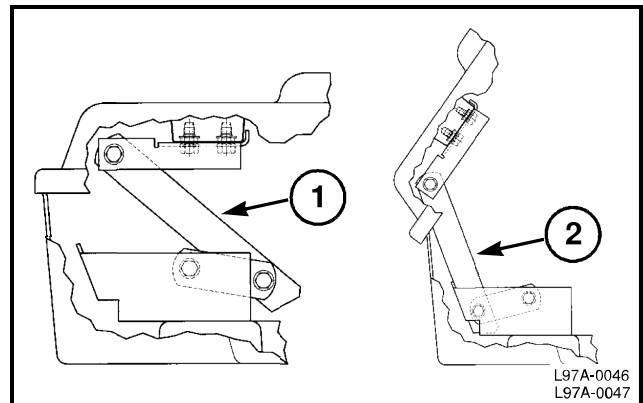


FIG. 13

FIG. 14: Lift the left-hand side of the cab roof. Use a support (1) to keep the cab roof open.

To close the cab roof, remove the support rod on the left-hand side of the cab roof and lower the cab roof. Pivot the hinges on the right-hand side in to the original position. Make sure the spacers for the rod assemblies are in the correct position. Make sure the cab roof is aligned and seated on the headliner. Install the four rod assemblies and then the eight washer head machine screws.



FIG. 14

General Information

Cab Roof (9220 / 9420)

The cab roof pivots on two hinges for access to the air conditioner, heater, windshield wiper motor (if installed), and lighting.

IMPORTANT: Do not open cab roof cap where wind can catch cab roof cap and cause damage.

FIG. 15: To lift the cab roof, remove the two knobs (1) that fastens the cab roof to the cab frame. From the inside of the cab, the knobs are on the front and rear corners on the left-hand side.

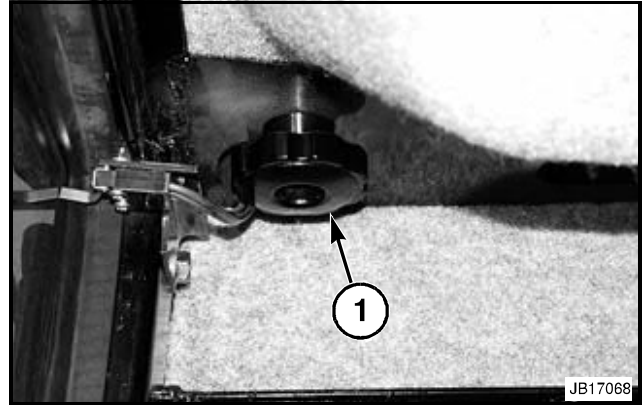


FIG. 15

FIG. 16: From the outside of the cab, lift the left-hand side of the cab roof. Move the support bracket (1) outward until over center to support the cab roof.

To close the cab roof, move the support bracket inward until the cab roof can be lowered. Lower the cab roof all the way. Make sure the roof bolts (2) do not catch on any wiring or hoses. Install and tighten the knobs on the roof bolts from the inside of the cab.

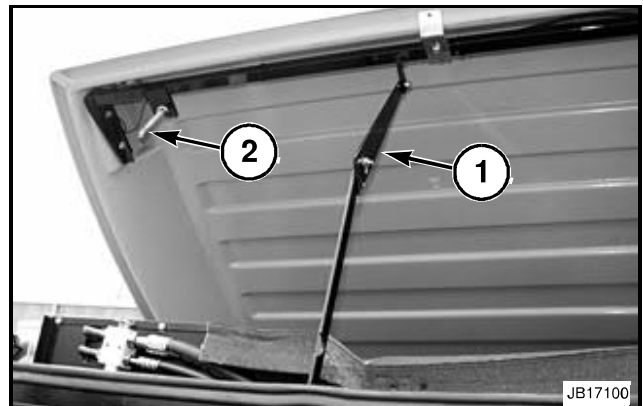


FIG. 16

SAFETY

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SAFETY ALERT SYMBOL

FIG. 1: The safety alert symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!


This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.



FIG. 1

SAFETY MESSAGES

FIG. 2: Whenever you see the words and symbols shown below, used in this manual, you **MUST** take note of their instructions as they relate to personal safety.

 **DANGER:** Indicates an imminently hazardous situation that, if not avoided, will cause 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

SAFETY SIGNS

If a used machine has been purchased, be sure that 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.

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

OPERATOR'S MANUAL

FIG. 3: The Operator's Manual is stored in the holder (1) on the machine. After using the Operator's Manual, return the manual to the storage location.

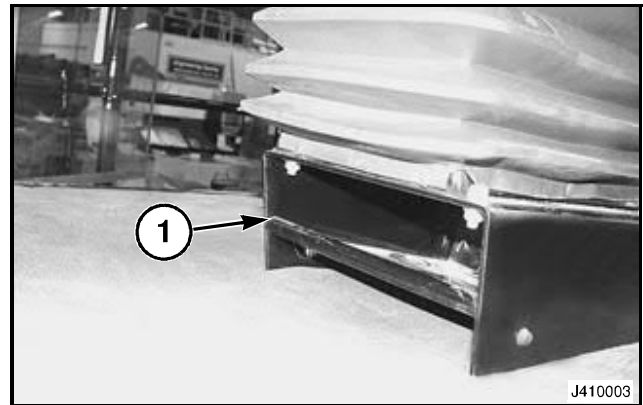


FIG. 3

A WORD TO THE OPERATOR

FIG. 4: It is YOUR responsibility to read and understand the safety section in this manual before operating this machine. Remember that YOU are the key to safety. Good safety procedures 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 normal 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 found during the normal operation and maintenance of this machine, and to suggest possible ways of dealing with these situations. This section is NOT a replacement for safety procedures featured in other sections of this manual.

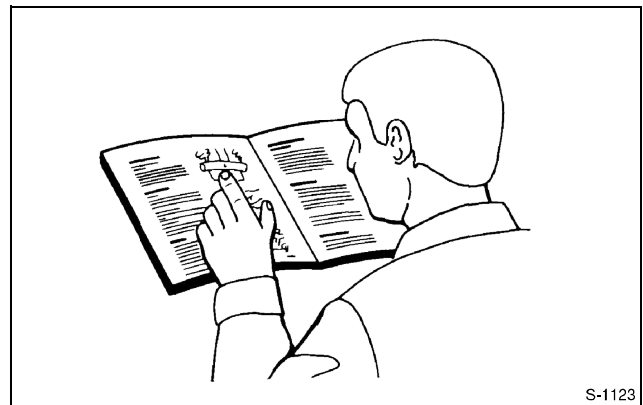


FIG. 4



CAUTION: See the header Operator's Manual for other important safety information.



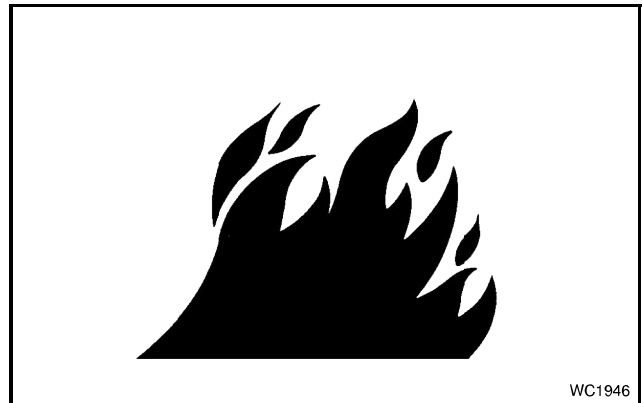
CAUTION: See the engine Operation and Maintenance Manual for other important safety information.

FIRE PREVENTION

FIG. 5: Because of the nature of the crops this machine will operate in, the risk of fire is present. Regular inspection of the machine can reduce the risk of fire.

Keep the machine free of crop debris to help prevent fires.

Check the machine daily for any noises that are not normal. Such noises could indicate a failed bearing that can cause heat buildup.



WC1946

FIG. 5

FIG. 6: Because of the flammable nature of many crops, a fire extinguisher must be located within easy reach of the operator. Check the fire extinguisher regularly as instructed by the manufacturer.

Keep an emergency first aid kit handy for treatment of minor burns, cuts, or scratches.



S-1131

FIG. 6

TRAVEL ON PUBLIC ROADS

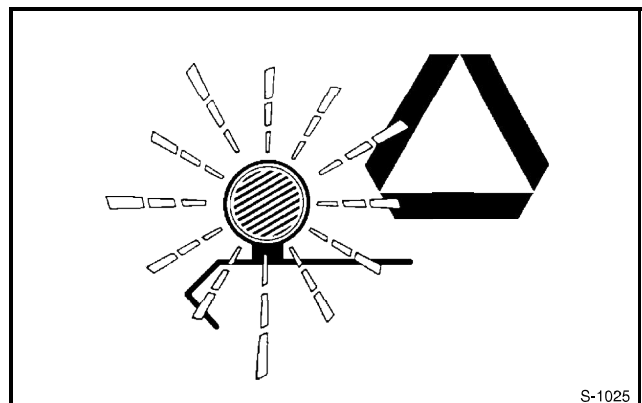
FIG. 7: Use the lighting and marking system supplied with the machine when roading. Make sure all the flashers are operating prior to driving on the road. Make sure the reflectors are installed, in good condition, and wiped clean. Be sure the SMV emblem is clean, visible, and correctly mounted on the rear of the machine.

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.

Adjust travel speed to maintain control at all times. Limit speeds to 24 km/h (15 mph). Be aware of other traffic on the road. Keep well over to your own side of the road and pull over, when possible, to let faster traffic pass.

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

Always travel with the header as low as possible. DO NOT drive with header up and the lift cylinder stops in the locked position. See Cylinder Stops in this section for more information.



S-1025

FIG. 7

Safety

PREPARE FOR OPERATION

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

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

Make certain that all controls are in neutral and the parking brake is engaged before starting the machine. Make certain that all people are well away from your area of work before starting and operating the machine.



WARNING: Any time the engine is running and the parking brake is disengaged, the machine will turn if the steering wheel is moved even though the travel control lever is in neutral.

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



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

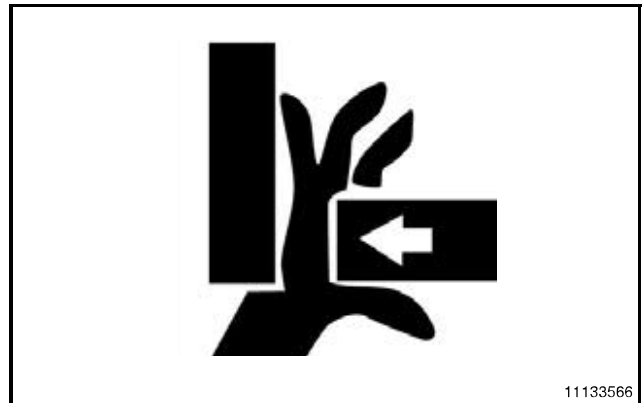
OPERATION

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



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

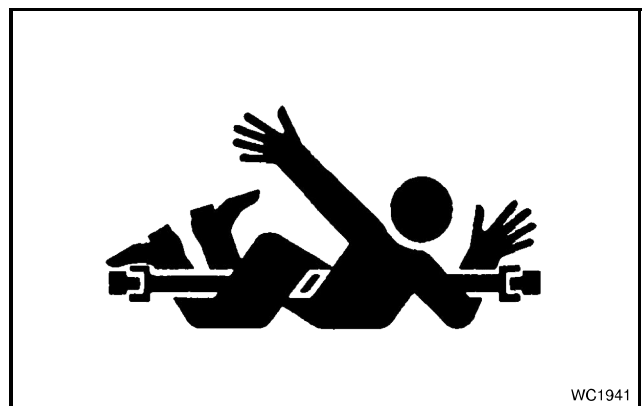
DO NOT use attachments unless the attachments are approved optional equipment.



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FIG. 8

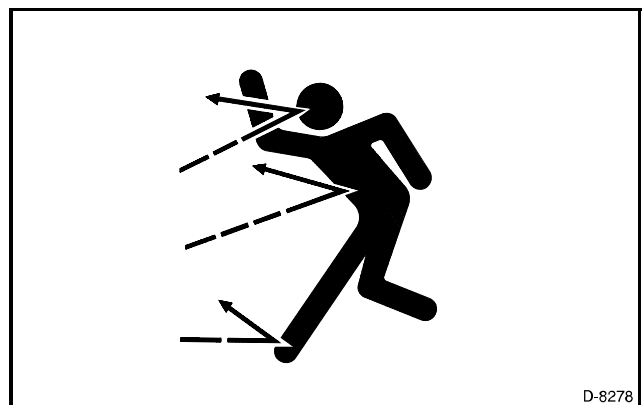
FIG. 9: Do not operate the machine with drive shaft shields open or removed. Entanglement in rotating drive shafts can cause serious injury or death. Stay clear of rotating components.



WC1941

FIG. 9

FIG. 10: Never stand near the machine during operation. Debris can be thrown from the machine during operation possibly resulting in injury.



D-8278

FIG. 10

Safety

FIG. 11: Wear all protective clothing and personal protective equipment issued to you or called for by job conditions.

Wear approved hearing protection whenever operating the machine as required by country/local regulations.

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.

Always keep hands, feet, hair, and clothing away from moving parts.

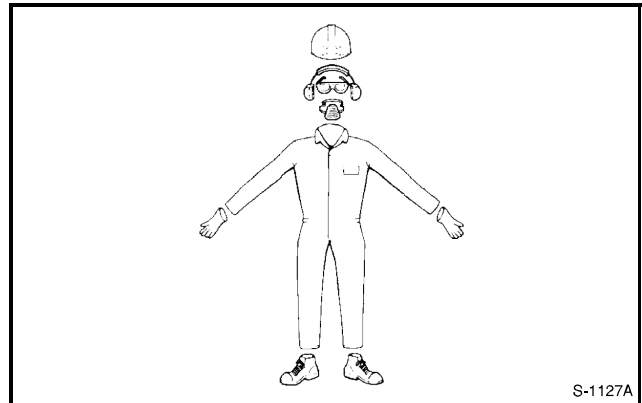


FIG. 11

FIG. 12: Face the ladder and use the handrails when getting on or off the machine.



FIG. 12

FIG. 13: Never operate the engine in a closed building unless the exhaust is vented outside.

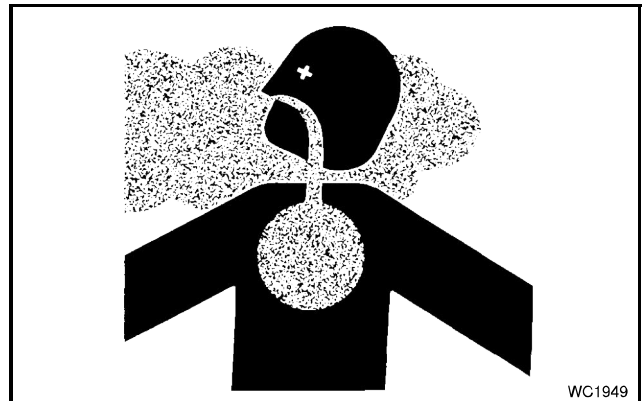


FIG. 13

FIG. 14: 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.

Securely fasten the seat belt when using the instructional seat, if equipped. 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. 15: Stay off slopes too steep for operation. Keep the header as low as possible while going down hills. Never suddenly reverse the wheels to stop or back up.

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

FIG. 16: When parking, put the machine on a solid level surface and lower the header to the ground. Put all controls in neutral, center and lock the steering wheel, and engage the parking lock control lever. Stop the tractor engine and take the key with you when parking the machine.



WARNING: Do not leave the machine unattended with the header raised. Lower the header fully before leaving the machine. A sudden loss of hydraulic pressure can cause the header to drop without warning.

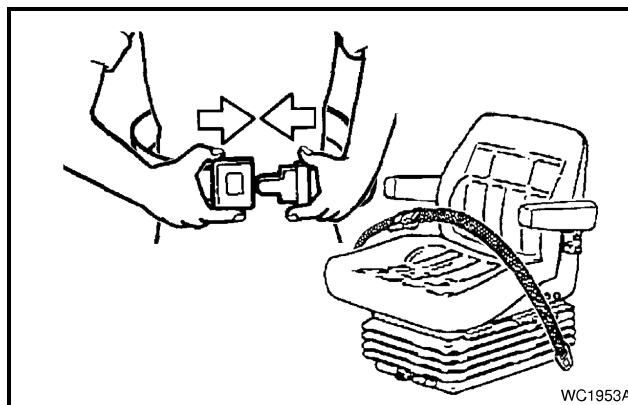


FIG. 14

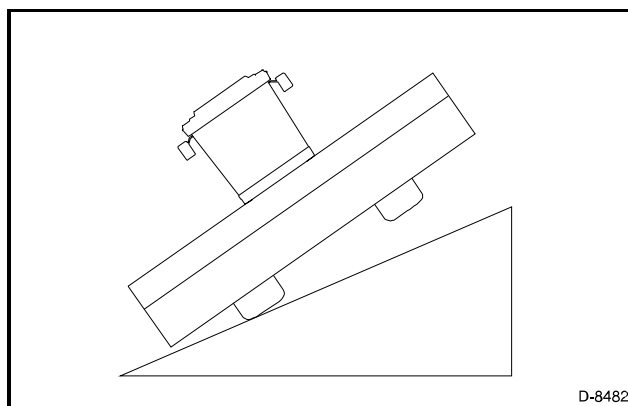


FIG. 15

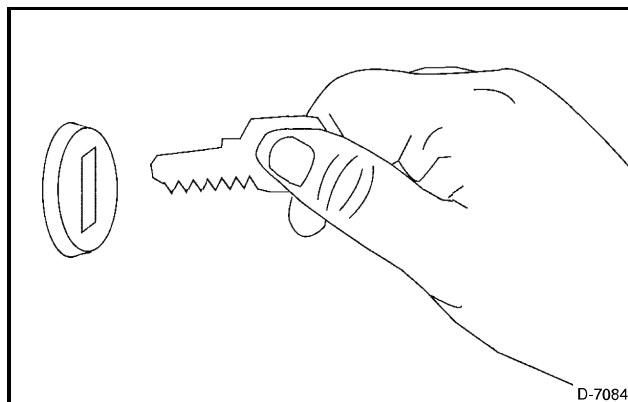


FIG. 16

Thank you very much for your reading. Please Click Here. Then Get COMPLETE MANUAL. NO WAITING



NOTE:

If there is no response to click on the link above, please download the PDF document first and then click on it.

Safety

MAINTENANCE

FIG. 17: Before doing any unplugging, lubricating, servicing, cleaning, or adjusting park the tractor on a solid level surface. Put all controls in neutral, center and lock the steering wheel, and engage the parking lock control lever. Stop the tractor engine and take the key with you.

LOOK AND LISTEN! Make sure all moving parts have stopped.

Always chock the wheels before working on or under the machine.

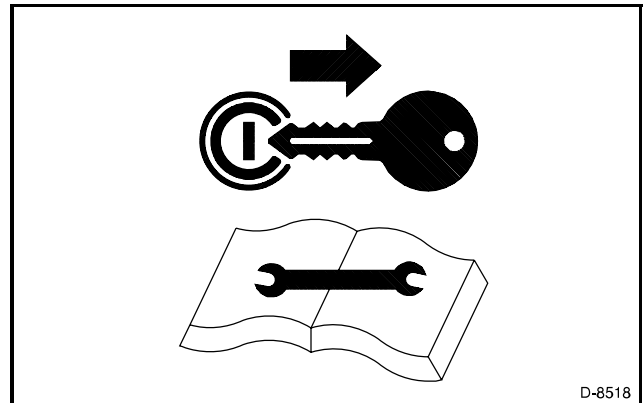


FIG. 17

FIG. 18: When working on the machine make sure the header is lowered to the ground.

When it is necessary for the header to be in the raised position, raise the header all the way and engage the header lift cylinder stops. See Cylinder Stops in this section for more information.



WARNING: Always install the header lift cylinder stops when working near the header. Do not rely on the hydraulic system to keep the header raised. A sudden loss of hydraulic pressure could cause the header to lower unexpectedly.

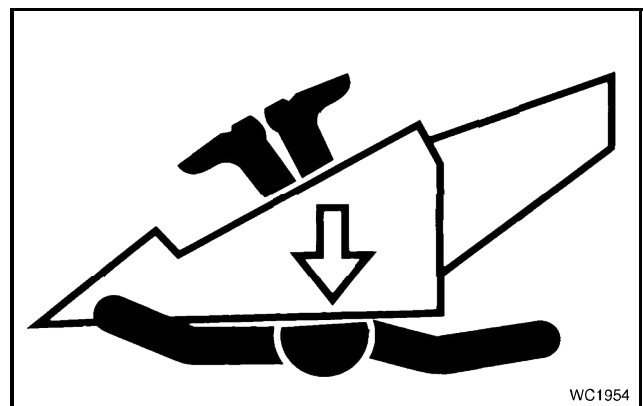


FIG. 18

FIG. 19: Never check, adjust, or lubricate chains or drive belts while the machine is running.

Never remove crop from the machine while the machine is running.

Moving parts can pull you in faster than you can move away!

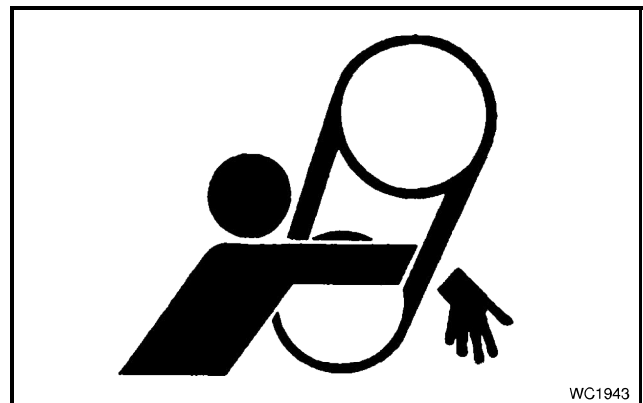


FIG. 19

FIG. 20: Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin, causing serious injury.

Fluid injected into the skin must be surgically removed within a few hours. If not treated immediately, a serious infection or toxic reaction can develop. See a doctor familiar with this type of injury immediately.

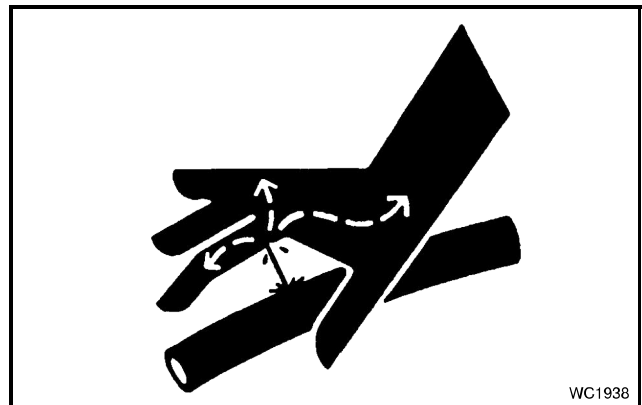


FIG. 20

FIG. 21: Hydraulic fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood to search for possible leaks, never use your hands. When checking for suspected leaks, wear leather gloves for hand protection and safety goggles for eye protection.

Be sure to relieve all pressure from hydraulic lines before disconnecting them. Before applying pressure to the system, make sure all hydraulic connections are tight and hydraulic lines have not been damaged.

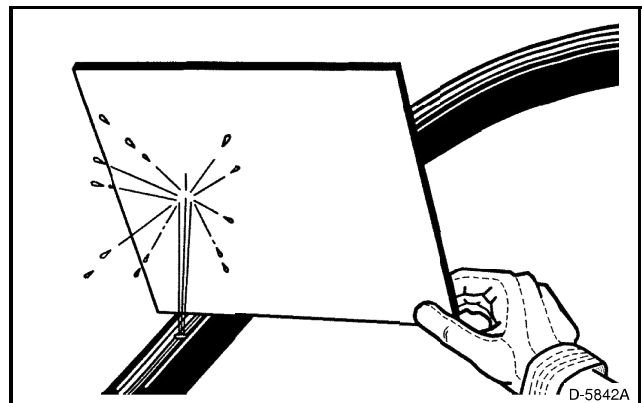


FIG. 21

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

Check all nuts and bolts periodically for tightness. Check for loose, broken, missing, or damaged parts. Keep everything in good repair.

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

Make sure all shields and guards are in the correct position before operating the machine.

CYLINDER STOPS

FIG. 22: Both header lift cylinders have cylinder stops (1). The cylinder stops are activated by one lever (2) outside the cab door.

To engage the cylinder stops, raise the header completely. Move the lever toward the cab and then pull back toward the rear of the machine to engage the cylinder stops. Make sure the cylinder stops are completely engaged in both header lift cylinders.

To disengage the cylinder stops, raise the header completely. Move the lever toward the cab and then push forward toward the header to disengage the cylinder stops. Make sure the cylinder stops are completely disengaged from both header lift cylinders.

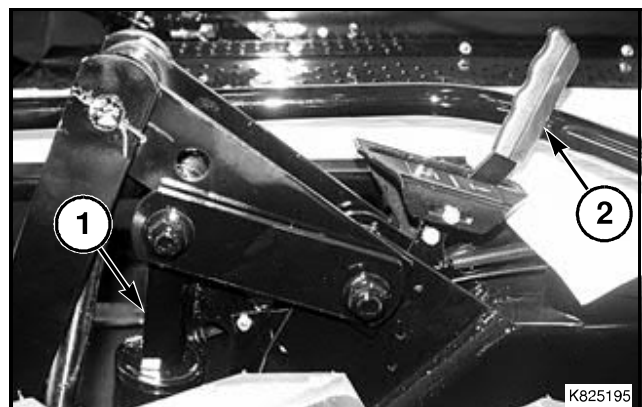


FIG. 22

Safety

ENGINE SAFETY



CAUTION: See the engine Operation and Maintenance Manual for other important engine safety information.

FIG. 23: Keep out of the engine compartment while the engine is running. Before opening the engine hood, shut off the engine and take the key with you.

LOOK AND LISTEN! Make sure all moving parts have stopped.

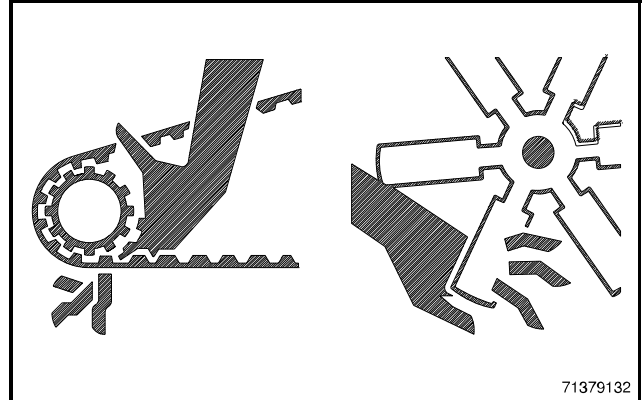


FIG. 23

FIG. 24: Be aware that the surfaces in and around the engine compartment will be hot if the engine has been running, even for a short time.

Always permit parts that contain hot fluid or gases to cool to the touch before handling or disconnecting.



FIG. 24

FIG. 25: Never remove the cap from a hot radiator. Escaping steam and hot fluids can cause personal injury.

Always permit the radiator to cool to the touch before removing the cap.

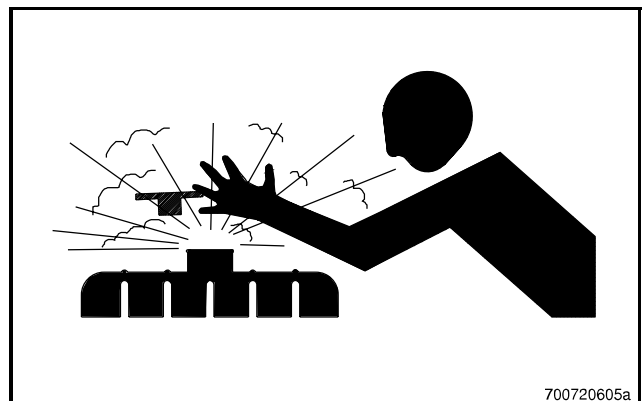


FIG. 25