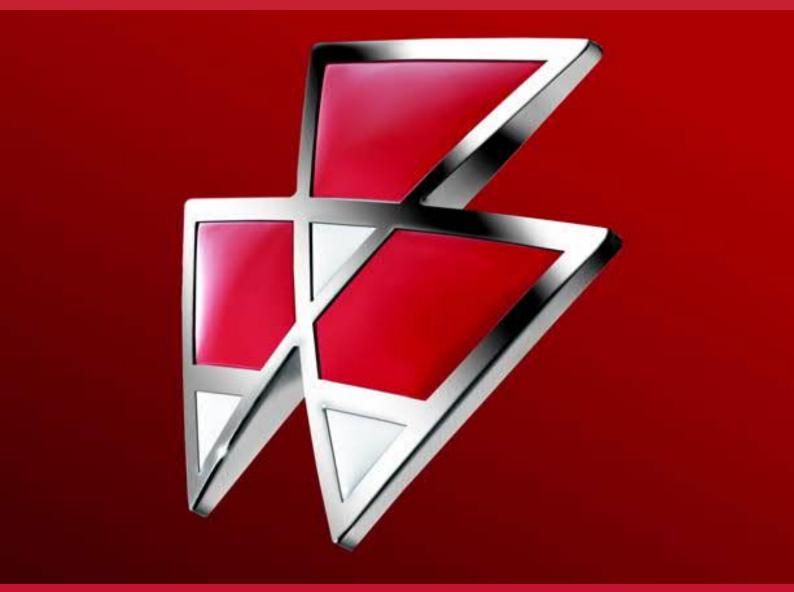
# **Service Manual**

# MF1363 / 1366

**Rotary Disc Mower** 



VISION INNOVATION LEADERSHIP QUALITY RELIABILITY SUPPORT PRIDE COMMITMENT



# Massey Ferguson®

## 1363 / 1366 Rotary Disc Mower

### SERVICE MANUAL 4283435M4

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# Massey Ferguson®

### 1363 / 1366 Rotary Disc Mower

### SERVICE MANUAL 4283435M4

# 01 - Safety

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**NOTES** 

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#### **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.

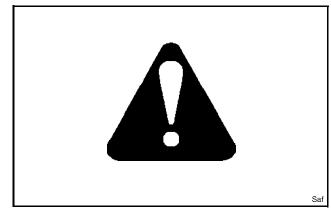


FIG. 1

#### **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.

#### **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.



FIG. 2

#### **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.

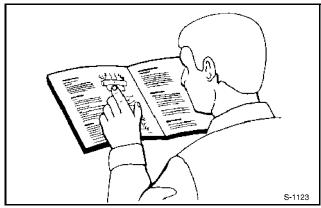


FIG. 3

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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.

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.

**FIG. 4:** The Operator Manual is stored in the holder (1) on the machine. After using the Operator Manual, return the manual to the storage location.

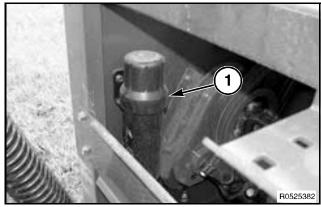


FIG. 4

#### 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 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.

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#### **OPERATION**

#### **General Information**

**FIG. 5:** 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.



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.

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.



WARNING: Only use a tractor with a ROPS cab and seat belt. The machine can throw stones and other debris 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 machine 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.

Make sure the top shields are closed before moving the tongue.

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

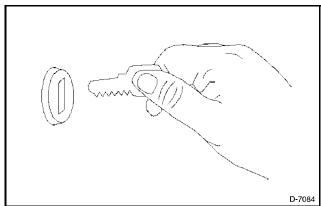


FIG. 5

**FIG. 6:** Avoid contact with electrical power lines. Contact with electrical power lines can cause electrical shock, resulting in very serious injury or death.

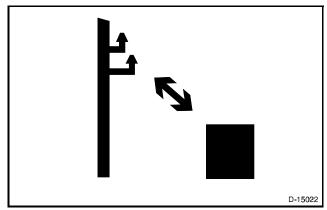


FIG. 6

#### **PPE (Personal Protection Equipment)**

**FIG. 7:** 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.

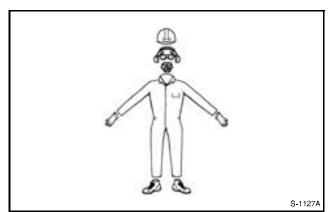


FIG. 7

#### **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.

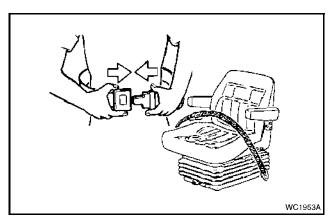


FIG. 8

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#### **Shield and Guards**

**FIG. 9:** 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.

All curtains must be in the correct operating position and in good condition.

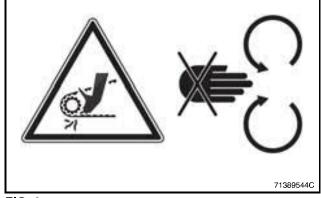


FIG. 9

**FIG. 10:** 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.



FIG. 10

#### **Exhaust Warning**

**FIG. 11:** Never operate the engine in a closed building unless the exhaust is vented outside.

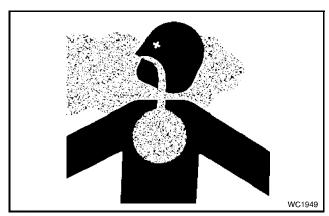


FIG. 11

#### **Flying Debris**

**FIG. 12:** Never stand near the machine during operation. Debris can be thrown from the machine during operation possibly resulting in injury.



WARNING: Be careful when operating along the side of a road or building. Rocks or other debris can be thrown from the machine during operation possibly resulting in injury.

Tilt the header back in fields where stones and foreign objects are present. This will raise the cutting knives and minimize debris being thrown by the rotating knives.

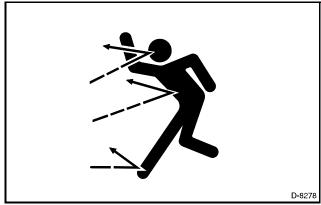


FIG. 12

#### **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. 13:** 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.

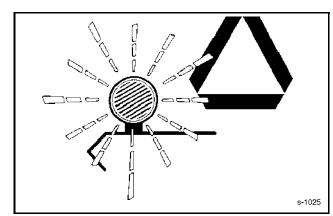


FIG. 13

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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.

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.

Put the tongue in roading position and engage the steering lockout valves. Raise the header all the way and engage both cylinder lockout valves. See Cylinder Stops in this section.

**FIG. 14:** 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.

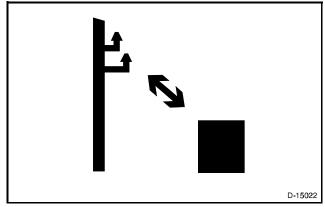


FIG. 14

#### **MAINTENANCE**

#### **General Information**

**FIG. 15:** 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 machine is in good repair. Make sure all guards and shields are in position.

Check the disc and knife bolts regularly for tightness, especially after striking foreign objects. See Cutterbar in the Specifications section for correct knife bolt torque.

**FIG. 16:** When working on the header, raise the header all the way and engage both cylinder lockout valves. See Cylinder Stops in this section.

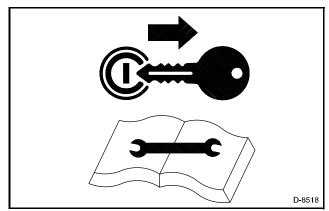


FIG. 15

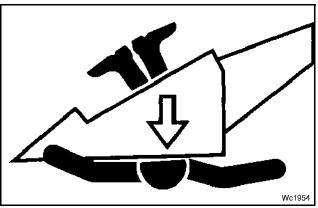


FIG. 16

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**FIG. 17:** Never service, check or adjust the drive chains or belts while the tractor engine is running.



FIG. 17

**FIG. 18:** 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. 18

#### Fire Prevention and First Aid

FIG. 19: 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,

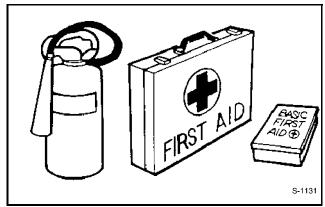


FIG. 19

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

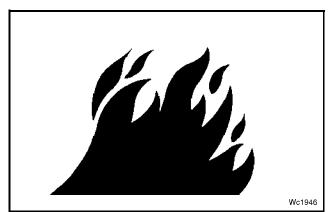


FIG. 20

#### **Checking for High Pressure Leaks**

**FIG. 21:** 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.

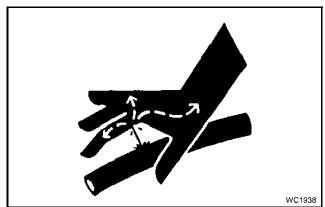


FIG. 21

**FIG. 22:** 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.

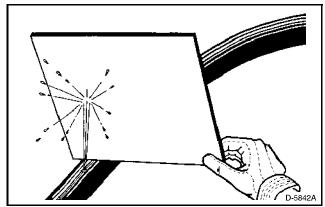


FIG. 22

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#### **Tire Safety**

**FIG. 23:** 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.



FIG. 23

#### **CYLINDER STOPS**

#### **Lift Cylinders**

**FIG. 24:** Both header lift cylinders have an independent cylinder lockout valve (1).

Engage the cylinder lockout valves on both header lift cylinders to prevent lowering the header.

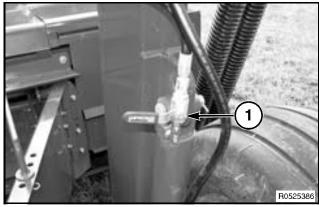


FIG. 24

**FIG. 25:** To engage the cylinder lockout valve, raise the header completely. Rotate the lockout lever away from the cylinder (1).

To disengage the cylinder lockout valve, rotate the lockout lever toward the cylinder (2).

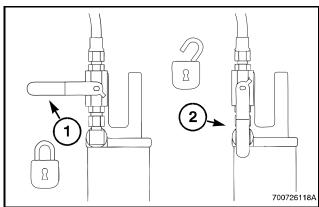


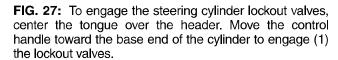
FIG. 25

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#### **Steering Cylinder**

**FIG. 26:** The steering cylinder has two lockout valves that are connected together with an actuating handle (1).

The steering cylinder lockout valves lock the tongue so the machine tows directly behind the tractor. The lockout valves prevent movement to either side due to the operation of the remote hydraulic control lever or a faulty hydraulic system.



The steering cylinder lockout valves must be disengaged for field operation. Move the control handle toward the rod end of the cylinder to disengage (2) the lockout valves.

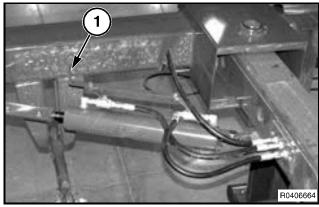


FIG. 26

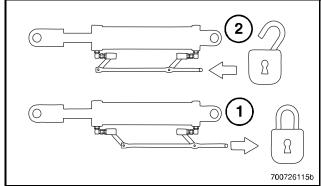


FIG. 27

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