MASSEY FERGUSON

MF 9226 / 9246

Auger Header

SERVICE MANUAL

FROM MASSEY FERGUSON

Workshop Service Manual

MASSEY FERGUSON

Auger Header

9226
9246

North America
4205 River Green Parkway, Duluth GA 30096 USA

October 2017
4283613M1
NA
English

MASSEY FERGUSON

CALIFORNIA
Proposition 65 Warning

WARNING: Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, or other reproductive harm.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.

Auger Header

1. General

1.1 General information

1.1.1 Introduction to this service manual

This service manual gives information from engineering tests, operating data, and the latest service techniques at the time of publication. Read this service manual carefully before doing any service on the machine.

The photos and illustrations used in this service manual were current at the time of publication. Production changes can cause machines to vary from the photos and the illustrations. The manufacturer reserves the right to redesign and change machines as necessary without notification.

WARNING:
Some pictures in this manual show the machine with shields or guards removed to permit for a better view of the subject of the picture. All shields and guards must be in position before operating the machine.

Machine movement when in normal use determines right-hand and left-hand.

1.1.2 Units of measurement

Measurements are given in metric units followed by the equivalent in US units. Hardware sizes are given in millimeters for metric hardware and inches for US hardware.

1.1.3 Table of contents

This manual has a table of contents at the front. The table of contents shows the divisions. The individual divisions also have a table of contents.

1.1.4 Page numbers

All pages have two numbers, such as 01-25. The first number shows the division. The second number shows the page in the division.

Page numbers occur on the lower right-hand or lower left-hand corner of each page.

1.1.5 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.

1.1.6 Proper disposal of waste

Improper disposal of waste can pollute the environment and ecology. A few examples of potentially harmful equipment waste can 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.

1.2 Safety

1.2.1 Safety symbol

The safety symbol tells you about a dangerous area!

Look for the safety symbol in this manual and on the machine. The safety symbols tell you that there is important safety instructions in the manual.

Fig. 1

1.2.2 Safety messages

The words DANGER, WARNING or CAUTION are used with the safety symbol. Learn these safety messages and obey the recommended precautions and safety instructions.

DANGER:
If you do not obey the recommended precautions and safety instructions, DEATH OR INJURY will occur.

WARNING:
If you do not obey the recommended precautions and safety instructions, DEATH OR INJURY can occur.

CAUTION:
If you do not obey the recommended precautions and safety instructions, INJURY can possibly occur.

Fig. 2

1.2.3 Information messages

The words important and note are not related to personal safety, and are used to give information about the operation and servicing of the machine.

IMPORTANT: *Identifies special instructions or procedures which, if not followed, can cause damage to the machine, the process, or the area around the machine.*

NOTE: *Information to make procedures easier.*

1.2.4 Safety signs

WARNING:

Do not remove the safety signs. Replace safety signs that you cannot read, are damaged, or are missing. Clean the machine surface with a weak soap and water solution before you replace the safety signs. Replacement safety signs are available from your dealer.

Always make sure that safety signs are in the correct locations and that you can read the safety signs. Illustrations of safety sign locations are at in this section.

Keep the safety signs clean. If necessary, use a weak soap and water solution.

1.2.5 A word to the technician

Read and understand the safety section in this service manual before operating or servicing the machine. Read and understand the safety sections in the manuals for all attachments before operating or servicing attachments. The technician has the key to safety. Good safety practices protect everyone.

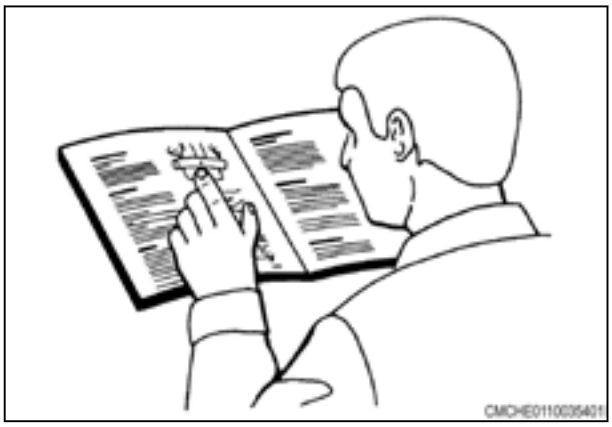

Fig. 3

Study the safety information in this service manual. Make the safety information a working part of the safety program. The safety information in this service manual applies specifically to this type of machine. Always do all other usual and customary safe working precautions. Remember - The technician has the responsibility for safety. Good safety practices can prevent serious injury or death.

The safety section points out some basic safety situations that can occur during the operation and maintenance of the machine. The safety section also suggests possible ways to deal with these situations. The safety section does not replace safety practices in other parts of this service manual.

Practice good safety to help prevent injury or death.

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

Do not let other persons operate the machine without instruction and training.

Follow all safety precautions and instructions in the manuals and on safety signs affixed to the machine and all attachments.

Use only approved attachments and equipment.

Make sure the 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. If any attachments used on this equipment have a separate Operator Manual, see that manual for other important safety information.

1.2.6 The service manual

Read the table of contents and basic layout. Become familiar with all parts of this service manual. This service manual gives the technician very important information.

Machine movement when in normal use determines right-hand and left-hand.

This manual covers general safety practices for this machine.

The photos, illustrations, and data used in this manual were current at the time of printing. Inline production changes can make machines vary from the information in the service manual. 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.

1.2.7 Travel on public roads

Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine 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 the specifications for the maximum speed for this 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. Use head lamps, flashing warning lamps, tail lamps 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.

Always travel with the header as low as possible.

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 machine. Be careful when transporting the machine on narrow roads and across narrow bridges.

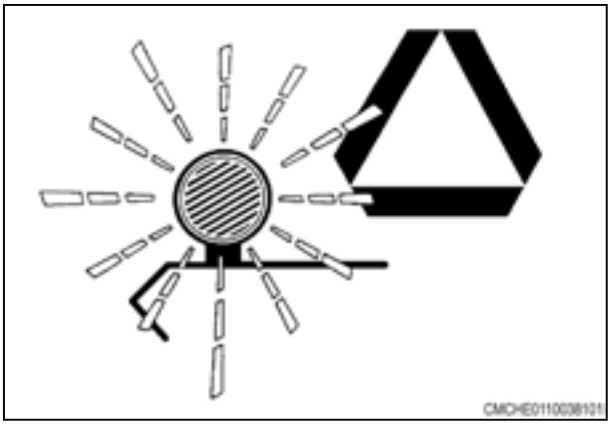

Fig. 4

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.

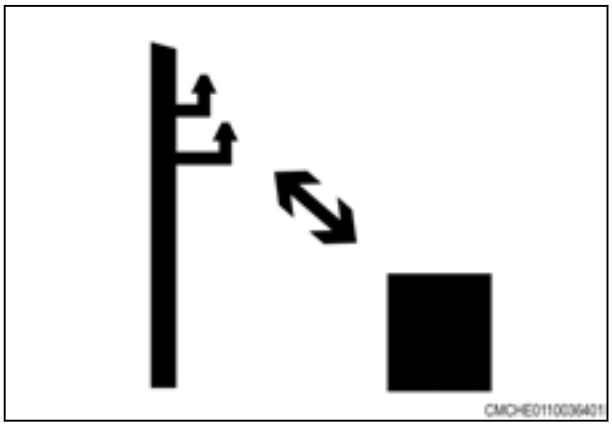

Fig. 5

1.3 Operation

1.3.1 Prepare for operation

Read and understand the operating instructions and precautions in this manual before you operate or do servicing on the machine.

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

WARNING:
If the engine is running and the parking brake is not applied, the machine will turn if the steering wheel is moved when the travel control lever is in neutral.

Make sure that all persons are a sufficient distance from your area of work before you start or operate the machine. Do checks on the controls and learn all controls in an area clear of persons and objects before you start work with the machine. Know the dimensions of the machine and have sufficient space available for operation. Do not operate the machine at high speeds around persons, buildings, other equipment, etc.

Always use correct procedures when you do tasks around and operate the machine. Do not let children or persons who do not know how to operate the machine operate the machine. Keep other persons away from your area of work. Do not let other persons ride on the machine.

Make sure that the machine is in the good mechanical condition. Make sure that the machine has the correct equipment as necessary by local regulations.

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

1.3.2 General information

When parking, park the machine on a solid level surface and lower the header to the ground. Put all controls in neutral, and apply the 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.

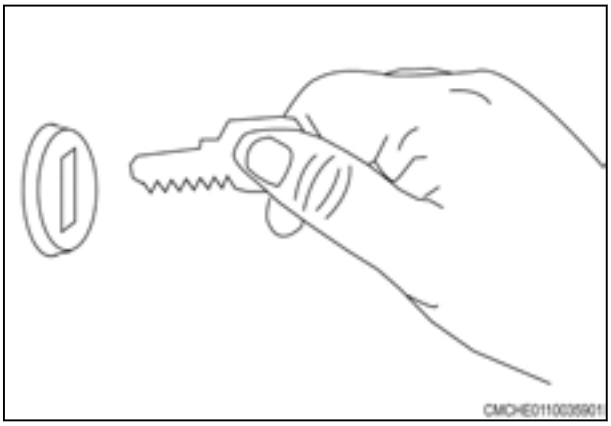

Fig. 6

Make sure the machine is in the proper operating condition according to the Operator Manual.

Always operate the machine with the control console turned on.

Do not dismount from moving machinery.

Stay off slopes too steep for operation.

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

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.

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

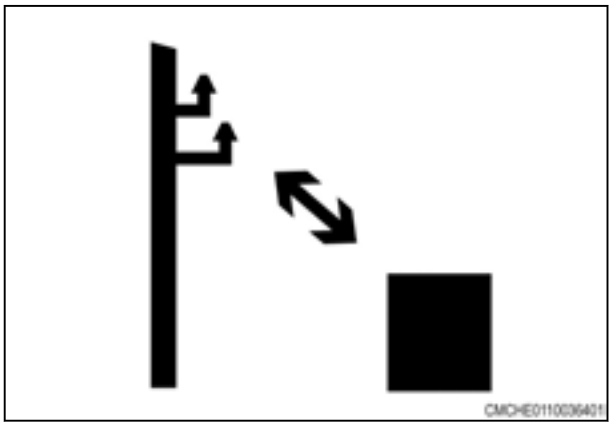

Fig. 7

1.3.3 Personal protective equipment

Put on all personal protective equipment (PPE) and protective clothes that are supplied to you or that are necessary for the conditions and by applicable laws. PPE includes equipment to prevent injury to your eyes, lungs, ears, head, hands and feet.

Always keep hands, feet, hair, and your clothes away from parts that move. Do not put on loose clothing, jewelry, watches, or other items that can tangle in parts that move. Tie up long hair that can also tangle in moving parts.

Fig. 8

1.3.4 Seat instructions

Put on the seat belt before you operate the machine. Always sit in the seat and have the seat belt on while you operate the machine. Replace the seat belts when they become worn or broken.

Do not use a seat belt loosely. Make sure that there is some tension on the seat belt. Do not wear the seat belt in a twisted condition or pinched between the structural parts of the seat.

Put on the seat belt if the instructional seat is used. Use the instructional seat only to train new operators or to find a problem. The instructional seat is only for short periods of use.

Do not let children use the instructional seat or be in the cab. Do not let other persons use the instructional seat or be in the cab.

Drive the machine at slower speed and on level ground when the instructional seat is used. Do not start, stop, or turn quickly when the instructional seat is used. Do not drive on highways or public roads when the instructional seat is used.

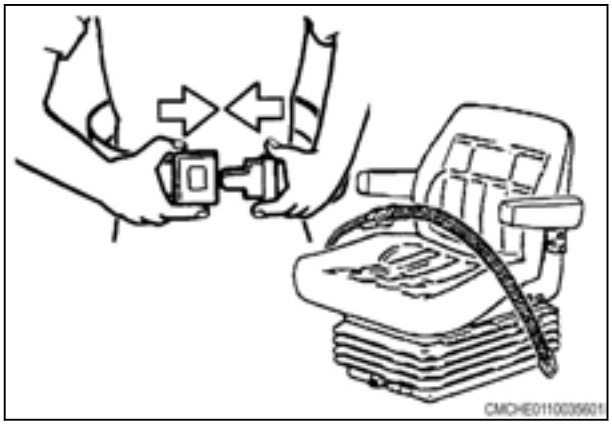

Fig. 9

1.3.5 Shield and guards

All shields and guards must be in the correct position and in good condition.

Do not open, remove, or put your hand behind shields while the engine is in operation. Belts and components that turn can cause entanglement, which can cause injury and death. Keep away from the components that turn.

Fig. 10

Do not operate the machine with the drive shaft shields open or removed. Entanglement in drive shafts that turn can cause injury or death. Keep away from the components that turn.

Make sure guards that turn are free.

Fig. 11

Do not make adjustments to the roll tension with the header engaged.

When you make adjustments to the roll pressure, stop the header. Lower the header to the ground and engage the parking brake. Set the engine to low idle.

1.3.6 Exhaust warning

Do not operate the engine in a closed building unless the exhaust is vented to the outside.

Do not tamper with or modify the exhaust system with unapproved extensions.

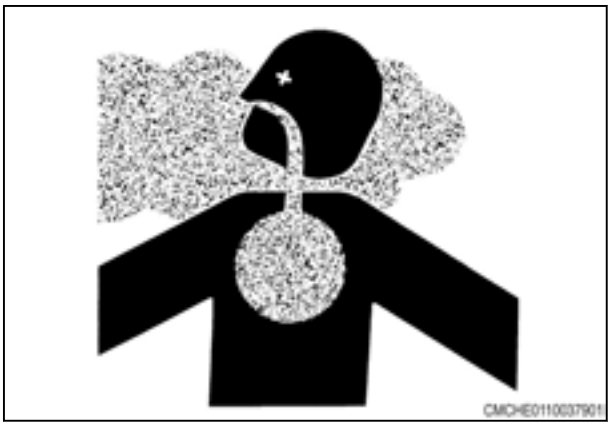

Fig. 12

1.3.7 Flying debris

WARNING:
Be careful when you operate along the side of a road or structures. Rocks and other materials can be thrown from the machine during operation and can cause injury.
If there are rocks and unwanted objects in a field, tilt the header up. This will lift the knives and reduce other materials thrown by the knives.

Stay away from the machine during operation. Some materials can be thrown from the machine during operation and cause injury.

Fig. 13

1.3.8 Handrails

Point your body in the direction of the ladder and use the handrails when you are on the machine ladders.

Fig. 14

1.3.9 Agricultural chemicals

Agricultural chemicals are very dangerous. Incorrect procedures with fertilizer, fungicides, herbicides, insecticides and pesticides can cause injuries to plants, animals, soil and other persons property.

Always read and follow all manufacturers instructions before you open chemical containers.

Read and follow instructions each time you use a chemical.

Use the same precautions when you do adjustments, do servicing, clean or store the machine as used when you put chemicals into the hoppers or tanks.

Tell all persons who are near chemicals of the possible dangerous results and the safety precautions that are necessary.

Stay upwind and away from smoke from a chemical fire.

Keep or discard all chemicals that are not used as specified by the chemical manufacturer.

1.4 Maintenance

1.4.1 General maintenance information

Before you do maintenance, lubricate, do servicing, clean, or make adjustments:

- Park the machine on a solid, level surface.
- Make sure that all the controls are in the neutral position and apply the parking brake.
- Make sure that the machine and the attachments are lowered to the ground.
- Stop the engine and take the key with you.
- Look and Listen! Make sure that all parts that move are stopped.
- Put chocks in front of and behind the wheels of the machine before you do work on or below the machine.

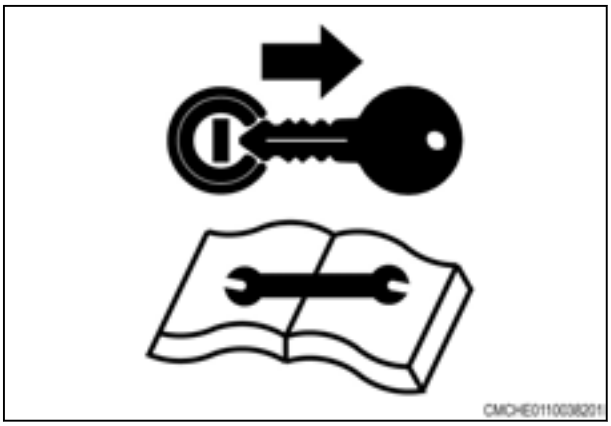

Fig. 15

After you do work on the machine, remove all tools from the machine.

Make sure that electrical connectors are clean before you connect them.

Do a check for loose, broken, missing, or damaged parts. Make sure that the machine is in good repair. Make sure that all guards and shields are in position.

Do not do the servicing, examine or adjust chains or belts while the engine is in operation.

Fig. 16

Do not operate the machine with the drive shaft shields open or removed. Entanglement in drive shafts that turn can cause injury or death.

Stay clear of components that turn.

Make sure that guards that turn can turn freely.

A loose yoke can come off a shaft and result in injury to persons or damage to the machine.

When you install a quick disconnect yoke, the spring activated locking pins must move freely and be in the groove on the shaft. Pull on the driveline to make sure that the quick disconnect yoke can not be pulled off the shaft.

Fig. 17

Remove spilled oil, antifreeze or fuel immediately from the steps, platform, and other access areas.

Keep all access areas clean of unwanted materials.

Fig. 18

When you do work on the machine, make sure that the header is lowered.

When it is necessary for the header to be in the up position, lift the header to the full up position, stop the engine, and take the key with you.

The header down valve on the windrower lift cylinder keeps the header from lowering.

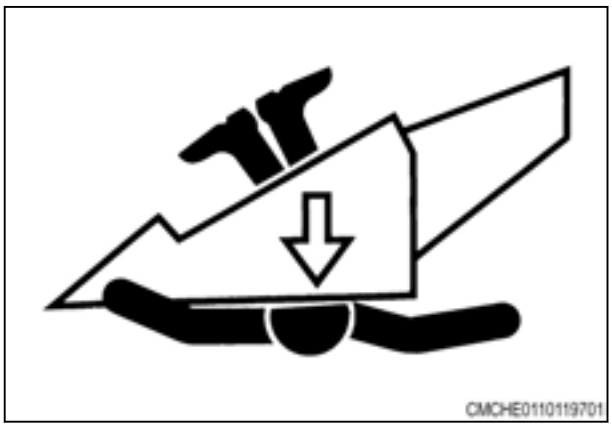

Fig. 19

1.4.2 Fire prevention and first aid

Be prepared for emergencies.

Keep a first aid kit available for use on small cuts and scratches.

Keep one or more fire extinguishers of the correct type. Examine fire extinguishers regularly as stated by the manufacturer. Make sure that the fire extinguishers are charged and in operating condition.

Crop material is flammable, there is a risk of fire. Use a water type fire extinguisher or other water source for a fire in crop.

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

Keep fire extinguishers easy to access where fires can occur.

Frequently remove crop material from the machine and examine for components that are too hot. Do checks on the machine each day for noises that are not usual. Unusual noises can indicate a worn out component that can cause too much heat.

If flame cutting, welding, arc welding, or grinding is to be done on the machine or attachments, clear

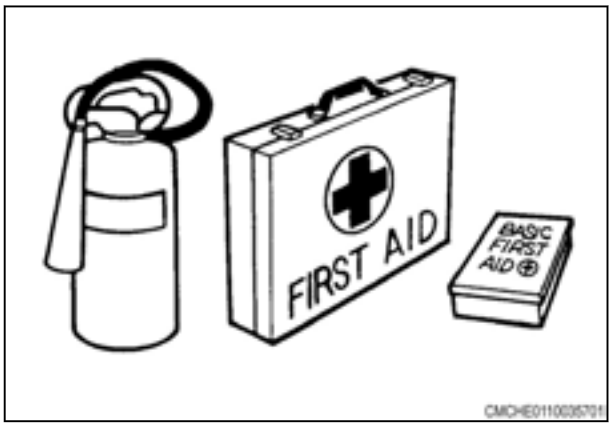

Fig. 20

crop material and unwanted material from around the area. Make sure that the area below the work area is clear of flammable material because falling molten metal and sparks can cause ignition in the material.

If fire occurs, move upwind and away from the smoke from the fire.

Fig. 21

1.4.3 High pressure leaks

Fluid that leaks from the hydraulic system or the fuel injection system is high pressure and is not easily seen. The fluid can go into the skin causing injury.

Fluid that is injected into the skin must be surgically removed immediately. If not removed immediately, infection and reaction can occur. Go immediately to a physician who knows about this type of injury.

Fig. 22

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

Remove all pressure before you loosen hydraulic lines. Lower equipment in the up position, close the accumulator valve, and stop the engine. Tighten all connections before applying pressure.

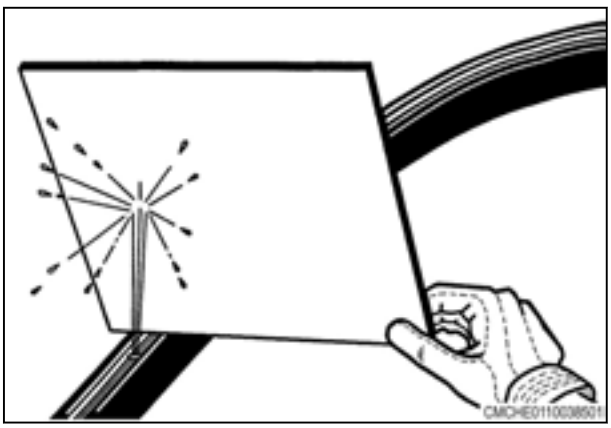

Fig. 23

1.4.4 Tire safety

Examine 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 examined 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 hazard 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.

When preparing a calcium chloride solution for fluid ballast the tractor tires, never pour water onto the calcium chloride. A chlorine gas can be generated which is poisonous and explosive. This can be avoided by slowly adding calcium chloride flakes to water and stirring until they are dissolved.

When seating tire beads onto rims, never exceed 2.4 bar (35 psi) or the maximum inflation pressure specified on the tire. Inflation beyond this maximum pressure may break the bead, or even the rim, with explosive force.

Fig. 24

1.4.5 Replacement parts

Where replacement parts are necessary for machine maintenance and servicing, you must use original equipment replacement parts.

The manufacturer will not accept responsibility for installation of unapproved parts and/or accessories and damages as a result of their usage.

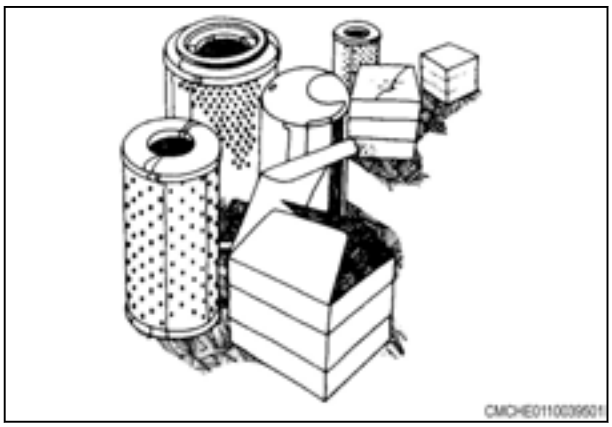

Fig. 25

1.5 Accumulators

1.5.1 Accumulators

The accumulators (1) are charged with dry nitrogen. Use only dry nitrogen when you charge the accumulators. DO NOT use air or oxygen or an explosion will occur.

DO NOT let the accumulators fall. Charged accumulators contain nitrogen under pressure. If the charging valves break away from the accumulators, the release of nitrogen will move the accumulators at a high rate of speed.

DANGER:
Charging or replacing the accumulators must be done by an approved dealer only.

1.6 Specifications

Specifications and design are subject to change without notice and without liability therefore.

1.6.1 Dimensions and weights

Single Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Width of cut	4276 mm (168 in)	4877 mm (192 in)	5486 mm (216 in)
Width overall	4786 mm (188.4 in)	5396 mm (212.4 in)	6005 mm (236.4 in)
Weight (less forming shields)	1746 kg (3850 lb)	1860 kg (4100 lb)	1996 kg (4400 lb)

Double Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Width of cut	4276 mm (168 in)	4877 mm (192 in)
Width overall	4786 mm (188.4 in)	5396 mm (212.4 in)
Weight (less forming shields)	2100 kg (4630 lb)	2223 kg (4900 lb)

1.6.2 Header specifications

Single Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Drive	Hydraulic		
Jack shaft speed	1300 rev/min		
Header angle range (adjustable)	5 to 12 degrees		
Lift range	-76 mm to +711.2 mm (-3 in to +28 in)		
Flotation	Hydraulic, adjustable from the control console		

Double Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Drive	Hydraulic	
Jack shaft speed	1300 rev/min	
Header angle range (adjustable)	5 to 12 degrees	
Lift range	-76 mm to +711.2 mm (-3 in to +28 in)	
Flotation	Hydraulic, adjustable from the control console	

1.6.3 Sickle specifications

Single Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Drive	Timed gearboxes and swaybars		
Speed	1840 strokes per minute (920 cycles per minute)		
Stroke	76.2 mm (3 in)		
Minimum cutting height	25.4 mm (1 in)		
Guard spacing	76.2 mm (3 in)		
Number of sickles	2		

Double Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Drive	Timed gearboxes and swaybars	
Speed	1840 strokes per minute (920 cycles per minute)	
Stroke	76.2 mm (3 in)	
Minimum cutting height	25.4 mm (1 in)	
Guard spacing	76.2 mm (3 in)	
Number of sickles	2	

1.6.4 Reel specifications

Single Condititoner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Type	All metal five or six bat cam track actuated tines and sealed ball bearings on tine tubes. You can make the five or six bat into a "heavy" reel.		
Diameter	1067 mm (42 in)		
Drive	Belt and number 60 chain		
Tines	Heavy duty		

Speed (shim adjustable)	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Mechanical	72 to 84 rev/min		
Hydraulic	18.65 to 82.24 rev/min		

Double Conditioner

	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Type	All metal five or six bat cam track actuated tines and sealed ball bearings on tine tubes. You can make the five or six bat into a "heavy" reel.	
Diameter	1067 mm (42 in)	
Drive	Belt and number 60 chain	
Tines	Heavy duty	

Speed (shim adjustable)	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Mechanical	72 to 84 rev/min	
Hydraulic	18.65 to 82.24 rev/min	

1.6.5 Auger specifications

Single Conditioner

Diameter	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Top	229 mm (9 in)		
Bottom	254 mm (10 in)		

Speed	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Top	368 rev/min		
Bottom	585 rev/min		

	4.3 m (14 ft) Header	4.9 m (16 ft) Header	5.5 m (18 ft) Header
Type	Dual and opposed rotation		
Drive	Sealed number 50 roller chain		

Double Conditioner

Diameter	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Top	229 mm (9 in)	
Bottom	254 mm (10 in)	

Speed	4.3 m (14 ft) Header	4.9 m (16 ft) Header
Top	368 rev/min	
Bottom	585 rev/min	