9125 / 9145
Auger Header
Workshop Service Manual

MASSEY FERGUSON®
9125 / 9145
Auger Header
4283389M1

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NOTES

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01 - Safety

Contents

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.

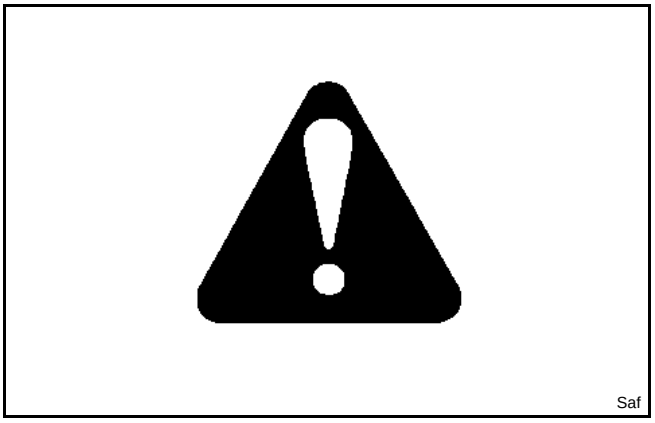

FIG. 1

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 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.

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

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

OPERATOR MANUAL

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

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 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 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.

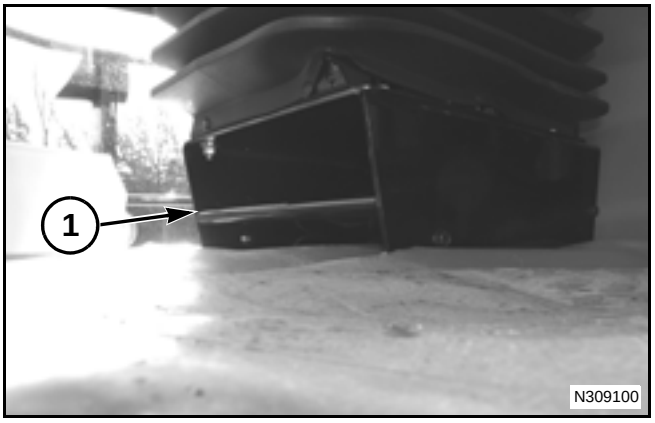

FIG. 3

A WORD TO THE OPERATOR

FIG. 4: It is YOUR responsibility to read and understand the safety division in this manual before operating this machine. Remember 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 this safety division 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 division is intended to point out some of the basic safety situations may be found during the normal operation and maintenance of this machine, and to suggest possible ways of dealing with these situations. This division is NOT a replacement for safety procedures featured in other divisions of this manual.

NOTE: This manual covers general safety procedures for this machine. This manual must always be kept with the machine. Return the manual to the storage location after use.

CAUTION: Refer to the tractor Operator Manual for other important safety information.

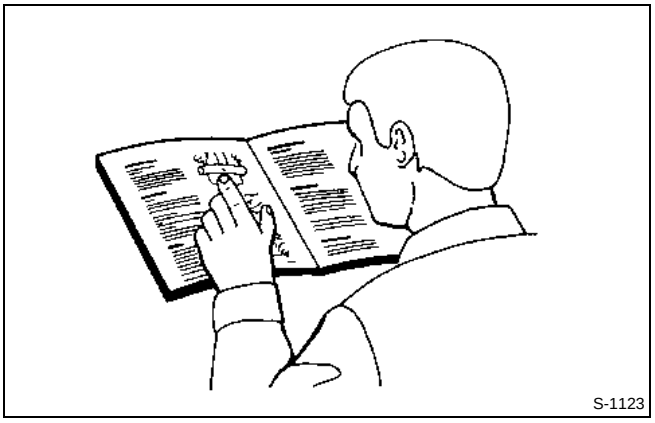

FIG. 4

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

Make certain all controls are in neutral and the parking brake is engaged before starting the machine. Make certain 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. 5: All shields and guards must be in the correct operating position and in good condition.

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

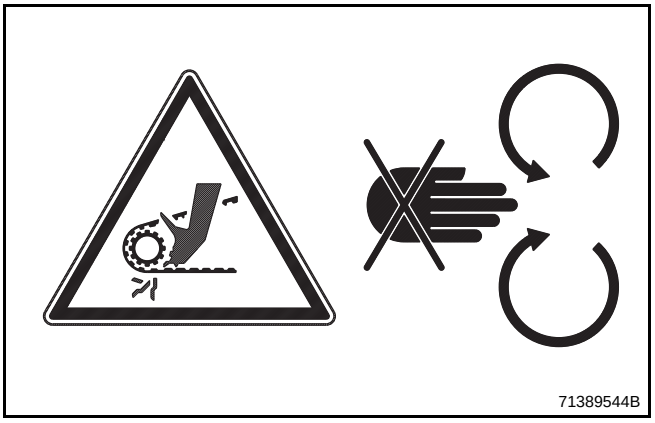

FIG. 5

FIG. 6: 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.

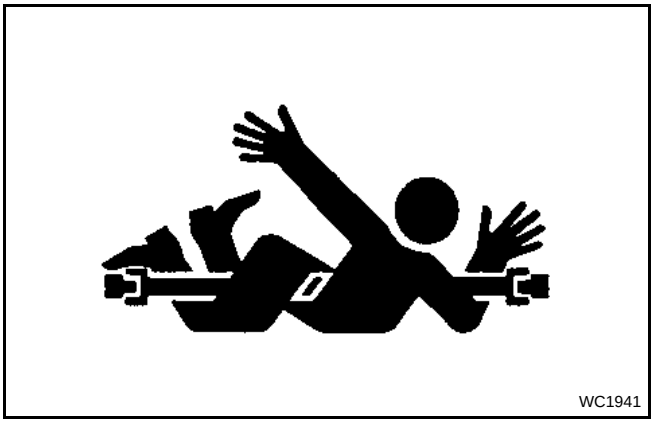

FIG. 6

FIG. 7: Never stand near the machine during operation. Debris can be thrown from the machine during operation possibly resulting in injury.

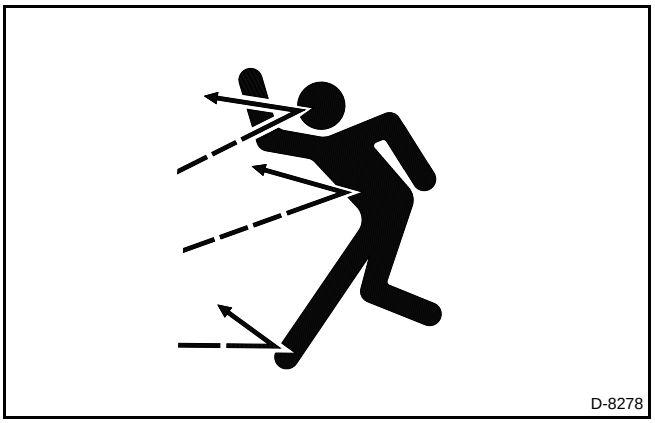

FIG. 7

FIG. 8: 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 which could entangle in moving parts. Tie up long hair which can also entangle in moving parts.

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

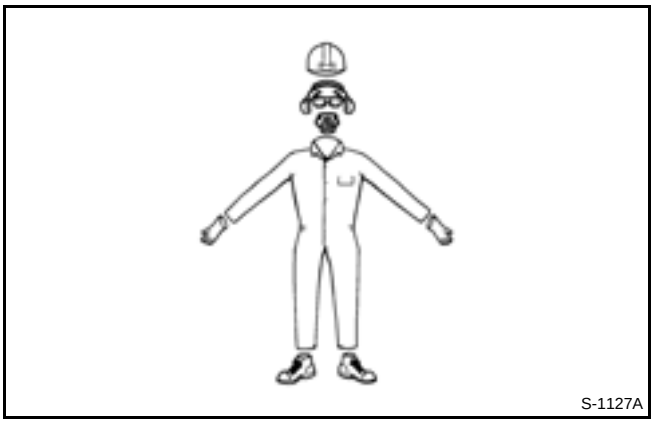

FIG. 8

FIG. 9: 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.

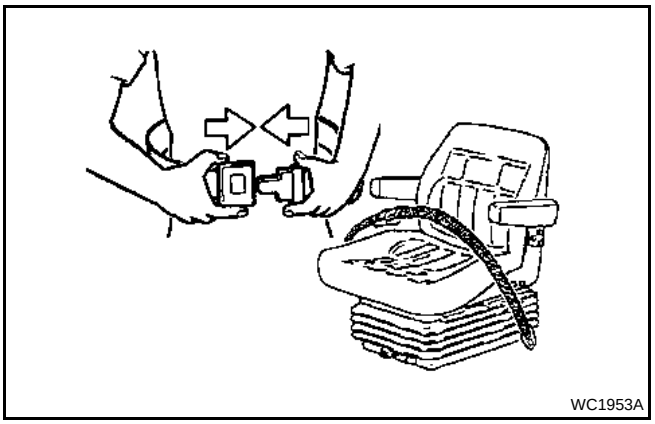

FIG. 9

FIG. 10: 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.

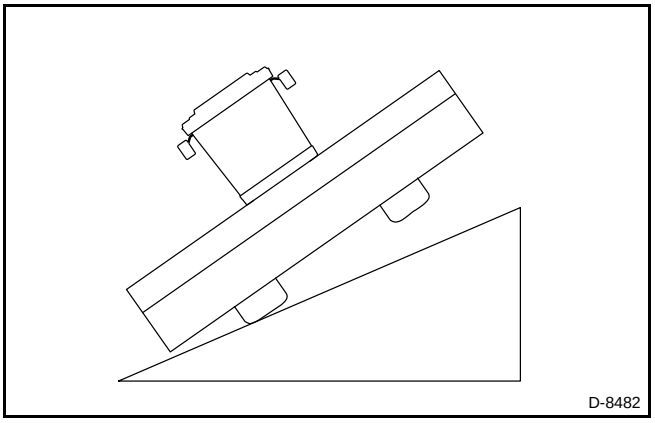

FIG. 10

FIG. 11: 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.

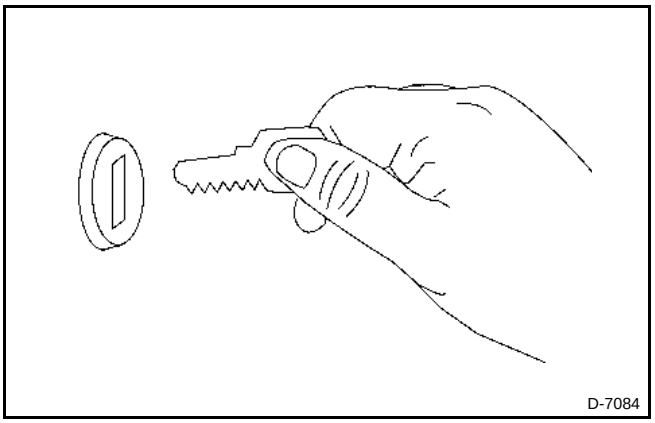

FIG. 11

TRAVEL ON PUBLIC ROADS

FIG. 12: 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 which 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 division for more information.

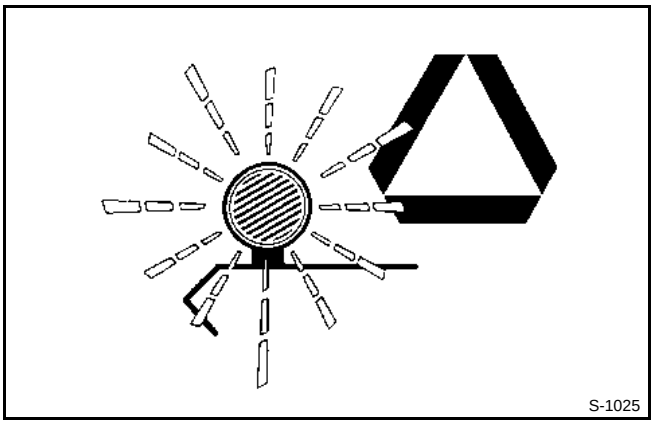

FIG. 12

FIRE PREVENTION

FIG. 13: 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 which are not normal. Such noises could indicate a failed bearing and can cause heat build up.

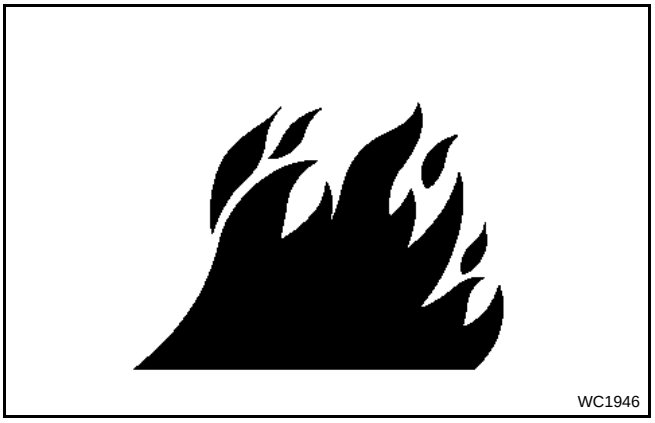

FIG. 13

FIG. 14: 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.

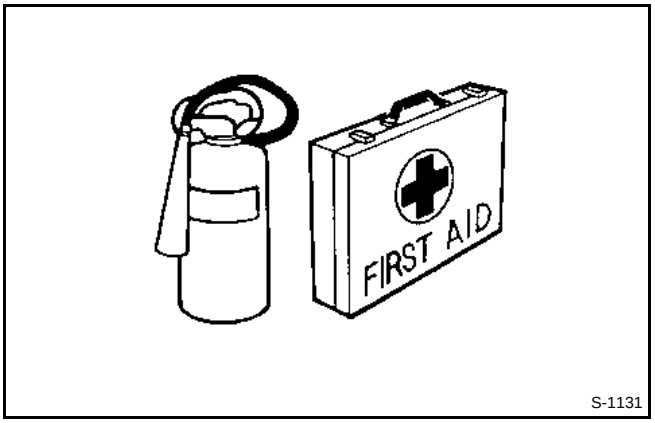

FIG. 14

MAINTENANCE

FIG. 15: 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.

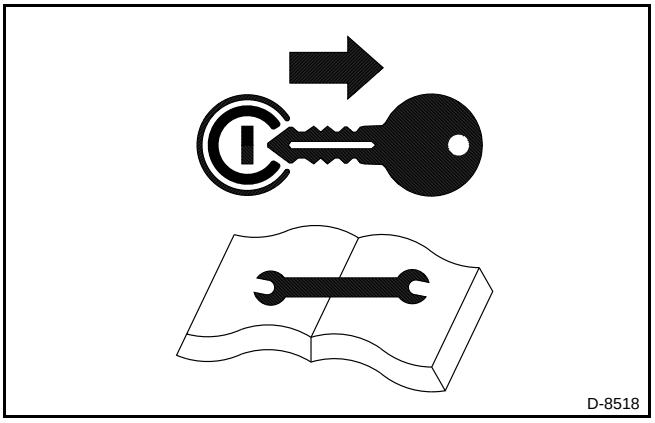

FIG. 15

FIG. 16: 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 division 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.

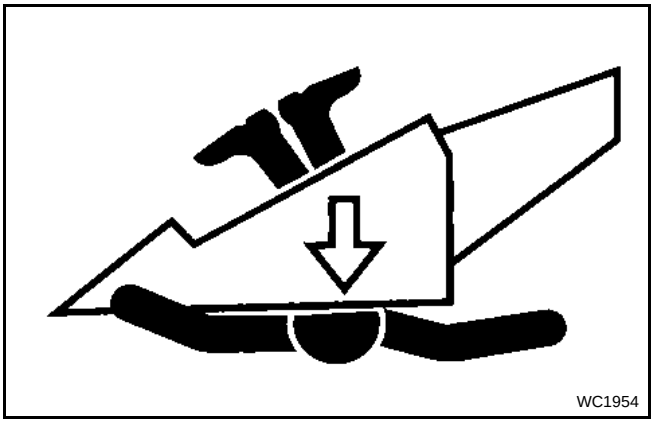

FIG. 16

FIG. 17: 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!

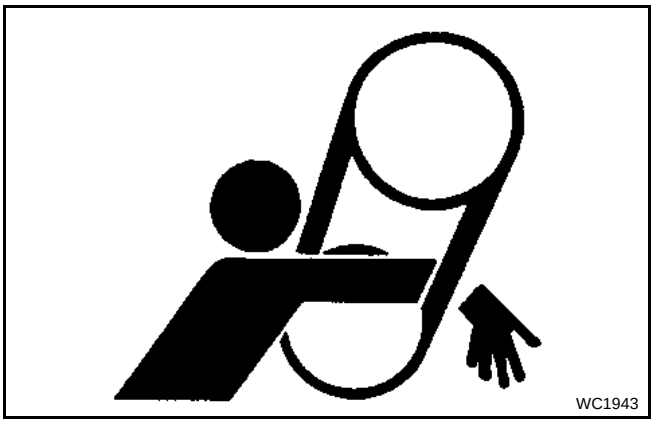

FIG. 17

FIG. 18: 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.

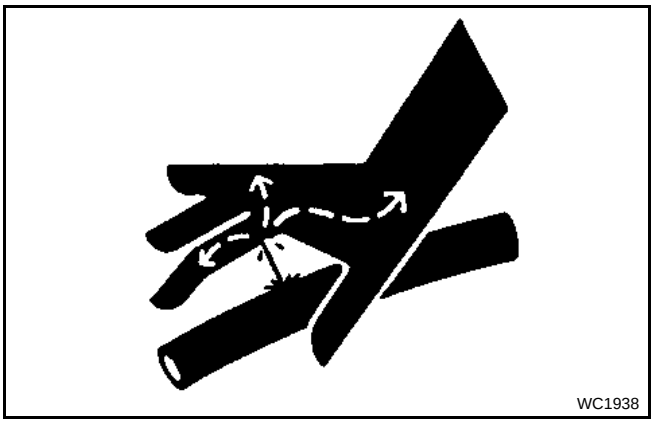

FIG. 18

FIG. 19: 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.

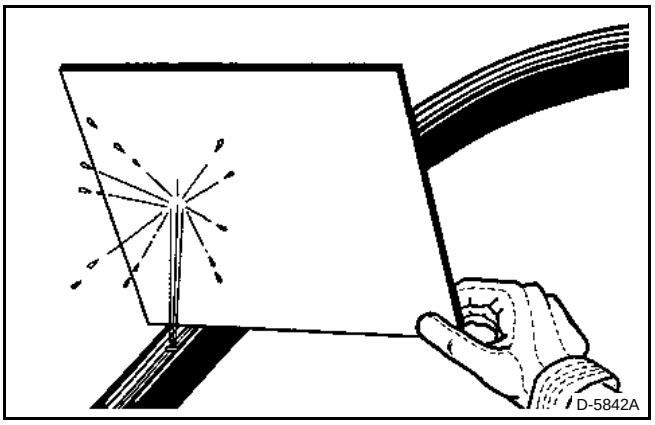

FIG. 19

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.

ACCUMULATORS

FIG. 20: The accumulators (1) are charged with dry nitrogen. Use only dry nitrogen when charging the accumulators. DO NOT use air or oxygen or an explosion will occur.

DO NOT drop the accumulators. Charged accumulators contains nitrogen under pressure. If the charging valves break away from the accumulators, the escaping nitrogen will propel the accumulators at a high rate of speed.

DANGER: Charging or replacing the accumulators must be performed by an authorized dealer only.

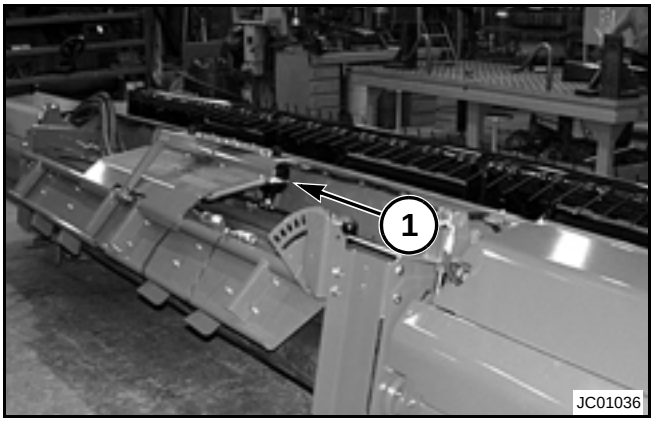

FIG. 20

CYLINDER STOPS

Both header lift cylinders have cylinder stops. The cylinder stops are activated by one lever outside the cab door.

FIG. 21: To engage the cylinder stops (1), raise the header completely. Move the lever (2) 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.

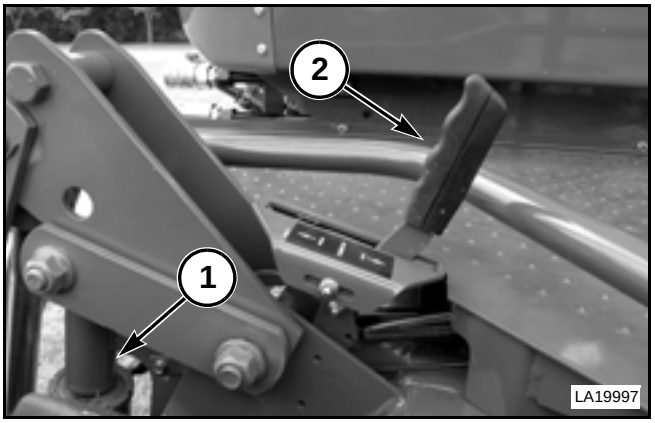

FIG. 21

FIG. 22: To disengage the cylinder stops, raise the header completely. Move the lever (1) 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.

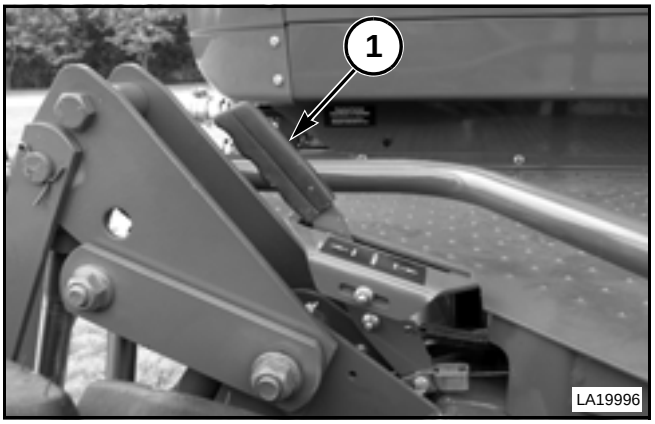

FIG. 22

NOTES

Massey Ferguson®

9125 / 9145
Auger Header

WORKSHOP SERVICE MANUAL
4283389M1

02 - General Information

Contents

NOTES

GENERAL 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.

PAGE NUMBERS

All page numbers are made of two numbers separated by a dash, such as 04-9. The number before the dash is the division number. The number following the dash is the page number in that division. 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 followed by the equivalent in U.S. units. Hardware sizes are given in millimeters for metric hardware and inches for U.S. hardware.

REPLACEMENT PARTS

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

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

MACHINE IDENTIFICATION

FIG. 1: Each machine is identified by a model and serial number on the serial number plate (1). The serial number plate is located on the left-hand end of the header.

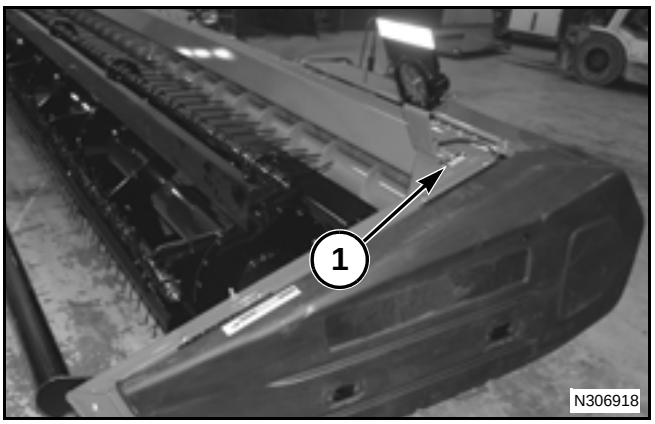

FIG. 1

DESCRIPTION - SINGLE CONDITIONER

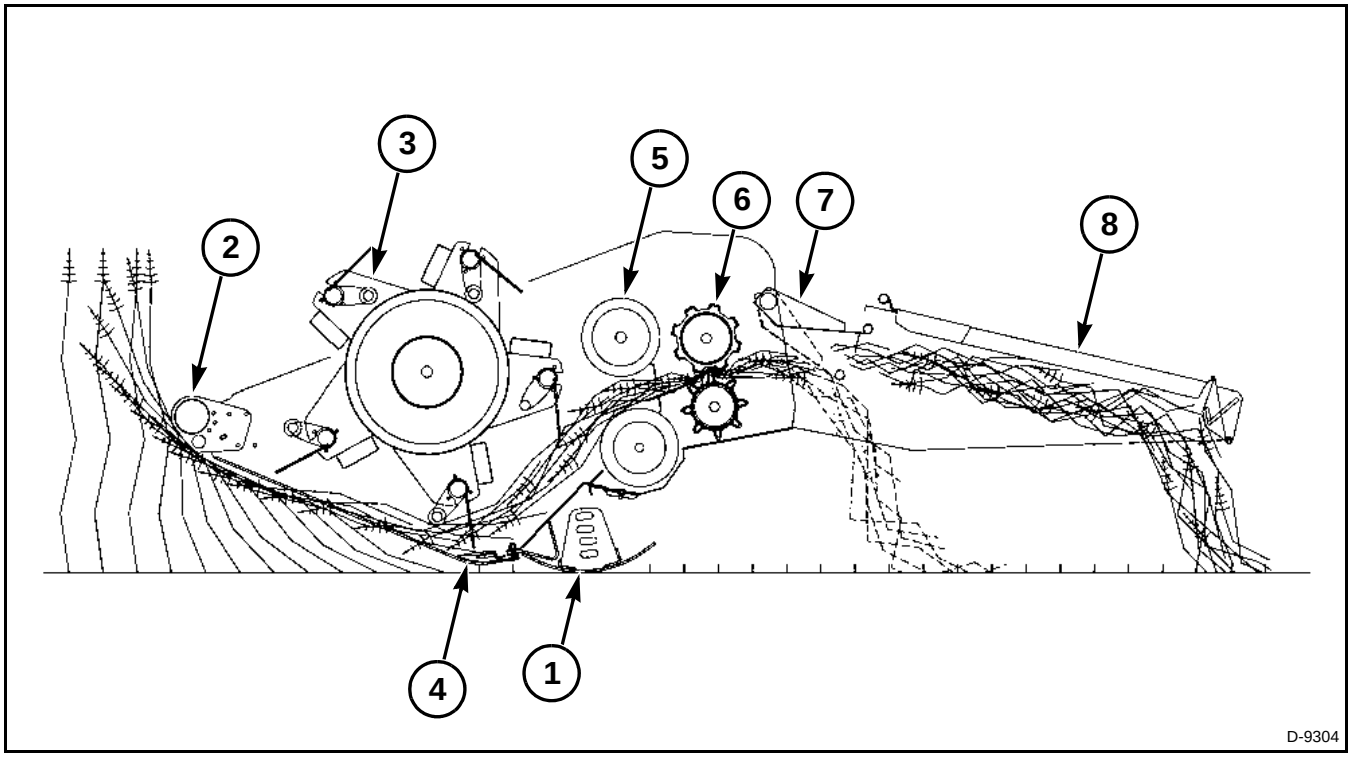

FIG. 2

FIG. 2: Header Diagram

Crop Flow

An auger header is used to cut the crop, condition the crop, and put the crop into a swath or windrow.

The header height is adjusted with the skid shoes (1) which will also change the cutting height. As the header is moved into the crop, the lean bar (2) pushes the crop forward so the crop will be fed into the header stem first. The reel (3) then moves the crop onto the cutterbar (4). The sickle in the cutterbar cuts the crop, and the reel moves the cut crop into the augers (5). The augers move the crop to the hay conditioner where the hay conditioner rolls (6) condition the crop for fast drying. The hay conditioner rolls also increase the speed of the crop. The swathboard (7) or forming shields (8) determine the crop position on the ground for drying and pickup operations.

Skid Shoes

The position of the skid shoes can be adjusted up or down to meet varying cutting height requirements. This adjustment is made manually.

Gauge wheels can also be installed instead of the skid shoes to help the header move across rough ground.

Lean Bar

The position of the lean bar can be rotated up and down to meet varying crop conditions.

Reel

The position of the reel can be adjusted up and down or fore and aft to meet varying crop conditions. Reel tine release of the harvested crop can also be adjusted to permit either an early or a later release of the crop in front of the augers. Reel speed can be adjusted for ground speed and crop conditions.

Cutterbar

The cutterbar uses two sickles that overlap in the center guard. It is important the sickles are aligned, timed, and have the correct register for good crop cut off.

Augers

The dual opposed rotating augers are designed to give even feeding into the hay conditioner. The auger stripper bars can be adjusted for varying crop conditions. This adjustment is made manually. The lower auger angles (optional) and the auger pans can also be installed or removed for varying crop and field conditions.

Hay Conditioner

The hay conditioner uses engaged rollers that provide aggressive conditioning for fast drying of conditioned crop. The amount of crop conditioning can be adjusted by changing the roll spacing and roll pressure.

A narrower roll spacing gives an increased level of crop conditioning while a wider roll spacing gives a decreased level of crop conditioning.

The roll pressure is applied by a hydraulic cylinder on the end of the rolls. The pressure is kept with an accumulator which also gives a flotation function to the rolls. The roll pressure is set with the valve, gauge, and switch on the header.

Swathboard

The swathboard can be rotated down behind the hay conditioner to direct the conditioned crop into a wide swath.

An optional swathboard actuator kit is available lets the operator make the swathboard adjustment from the cab of the tractor.

Forming Shields

The forming shields and rear deflector are used to form a windrow of varying width to fit any operation. The forming shield can be adjusted to make the windrow wider in heavy crop or narrower in light crop. The rear deflector can be adjusted to slow the crop which will let the crop free fall to the ground in a loose windrow. These adjustments provide maximum air flow through the windrow for fast crop drying.

DESCRIPTION - DOUBLE CONDITIONER

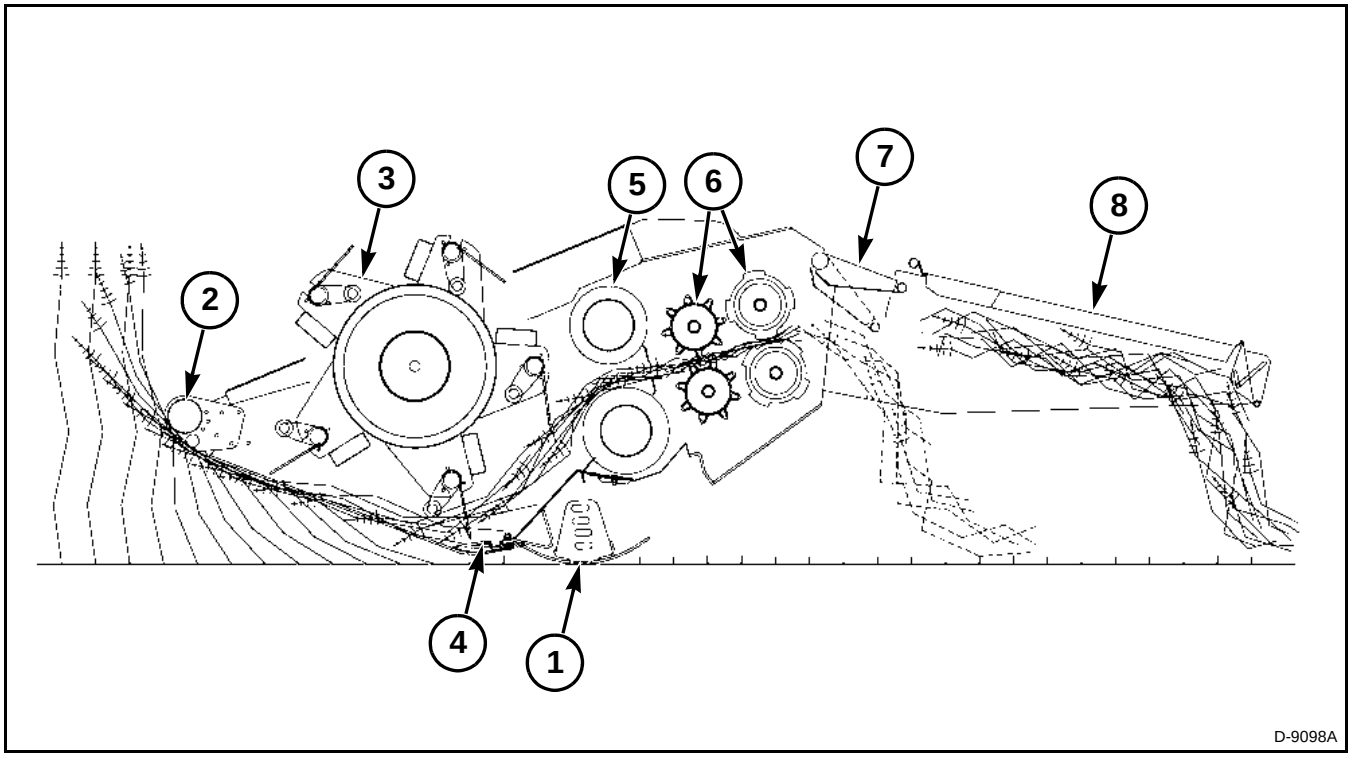

FIG. 3

FIG. 3: Header Diagram

Crop Flow

An auger header is used to cut the crop, condition the crop, and put the crop into a swath or windrow.

The header height is adjusted with the skid shoes (1) which will also change the cutting height. As the header is moved into the crop, the lean bar (2) pushes the crop forward so the crop will be fed into the header stem first. The reel (3) then moves the crop onto the cutterbar (4). The sickle in the cutterbar cuts the crop and the reel then moves the cut crop into the augers (5). The augers move the crop to the hay conditioner where the hay conditioner rolls (6) condition the crop for fast drying. The hay conditioner rolls also increase the speed of the crop. The swathboard (7) or forming shields (8) determine the crop position on the ground for drying and pickup operations.

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Gauge wheels can also be installed instead of the skid shoes to help the header move across rough ground.

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Hay Conditioner

The hay conditioner uses engaged rollers that provide aggressive conditioning for fast drying of conditioned crop. The amount of crop conditioning can be adjusted by changing the roll spacing and roll pressure.

A narrower roll spacing gives an increased level of crop conditioning while a wider roll spacing gives a decreased level of crop conditioning.

The roll pressure is applied by a hydraulic cylinder on the ends of the top rear and bottom front rolls. The pressure is kept with accumulators which also gives a flotation function to the rolls. The roll pressure is set with the valves, gauges, and switch on the header.

Swathboard

The swathboard can be rotated down behind the hay conditioner to direct the conditioned crop into a wide swath. This will provide maximum exposure to the sun for fast crop drying. However, this method requires further handling to prepare the crop for most packaging systems.

An optional swathboard actuator kit is available lets the operator make the swathboard adjustment from the cab of the tractor.

Forming Shields

The forming shields and rear deflector are used to form a windrow of varying width to fit any operation. The forming shield can be adjusted to make the windrow wider in heavy crop or narrower in light crop. The rear deflector can be adjusted to slow the crop which will let the crop free fall to the ground in a loose windrow. These adjustments provide maximum air flow through the windrow for fast crop drying.

COMPONENTS LOCATION

FIG. 4: Left-hand Side View

(1) Reel
(2) Left-hand sickle drive assembly
(3) Left-hand sickle drive gearbox
(4) Top auger drive sprocket
(5) Hay conditioner gearbox
(6) Header drive motor

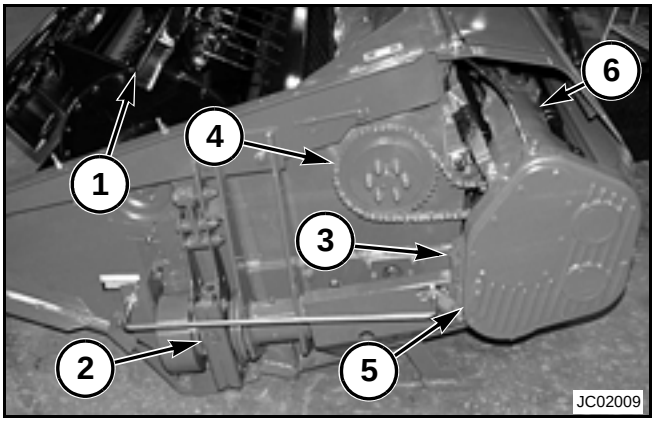

FIG. 4

FIG. 5: Right-hand Side View

(1) Lean bar
(2) Reel drive sheave
(3) Reel drive sprocket
(4) Reel drive belt tensioner
(5) Reel tine cam track
(6) Right-hand sickle drive assembly
(7) Right-hand sickle drive gearbox
(8) Bottom auger drive sprocket
(9) Slip clutch

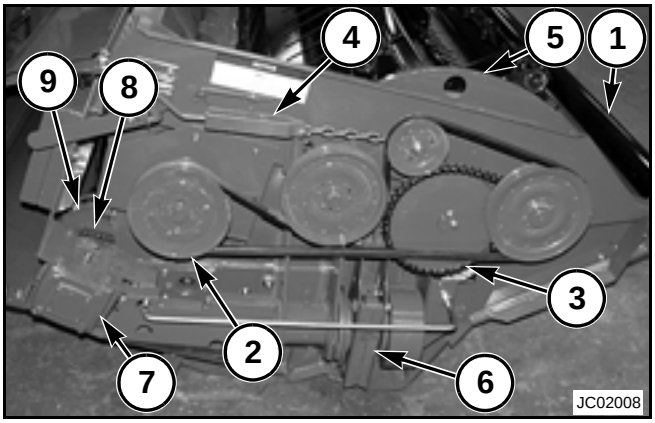

FIG. 5

FIG. 6: Right-hand Rear View

(1) Front hay conditioner rolls
(2) Rear hay conditioner rolls
(3) Accumulator
(4) Swathboard

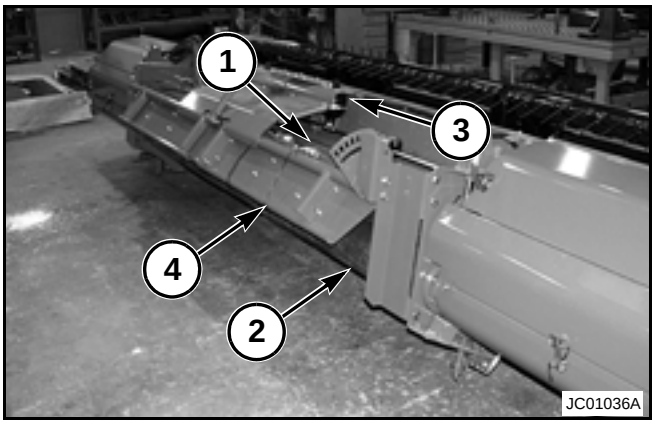

FIG. 6

COMPONENTS ACCESS

End Shields

FIG. 7: To open an end shield (1), pull on both latches (2) at the same time to release the end shield. Raise the end shield all the way up.

NOTE: Make sure the top drive shield (3) is down before opening the end shield.

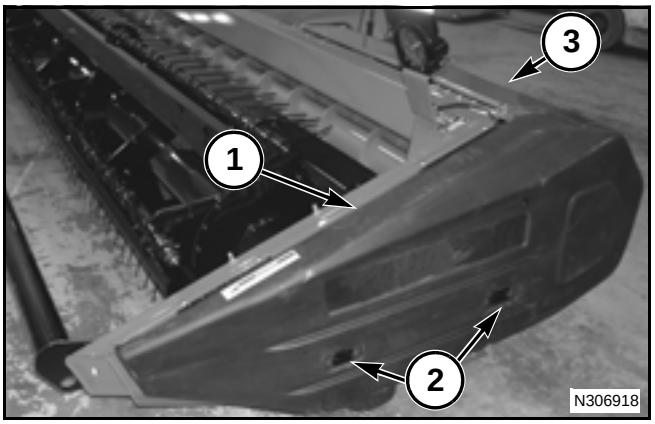

FIG. 7

FIG. 8: To hold an end shield open (1), raise the end shield all the way. Align the hole in the end shield with the pin (2) on the warning lamp. Remove the hairpin from the storage bracket (3). Install the hairpin (4) in the pin on the warning lamp.

To close the end shield, hold the end shield and remove the hairpin from the pin on the warning lamp. Install the hairpin in the storage bracket. Close the end shield.

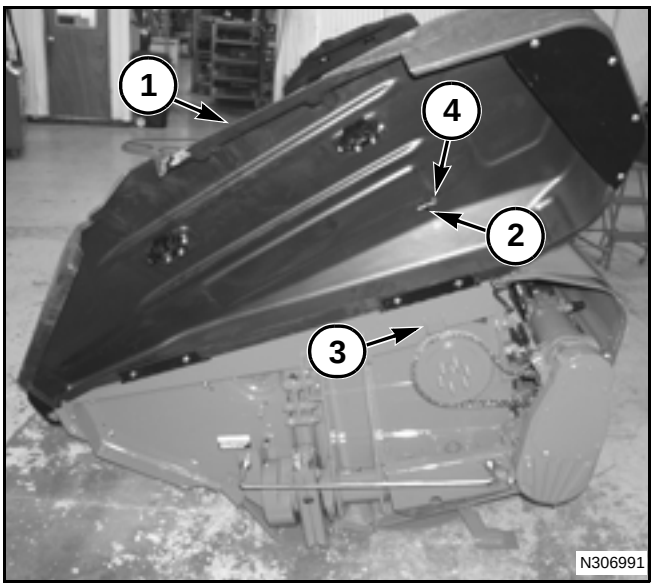

FIG. 8

Drive Shields

FIG. 9: To open the top left-hand drive shield (1), pull the rubber latch (2) out of the catch. Raise the left-hand drive shield all the way.

NOTE: Make sure the end shield (3) is down before opening the drive shield.

To open the bottom left-hand drive shield (4), open the top left-hand drive shield. Pull the rubber latch (5) out of the catch. Raise the bottom left-hand drive shield all the way.

To close a drive shield, put the drive shield in the closed position. Install the rubber latch in the catch.

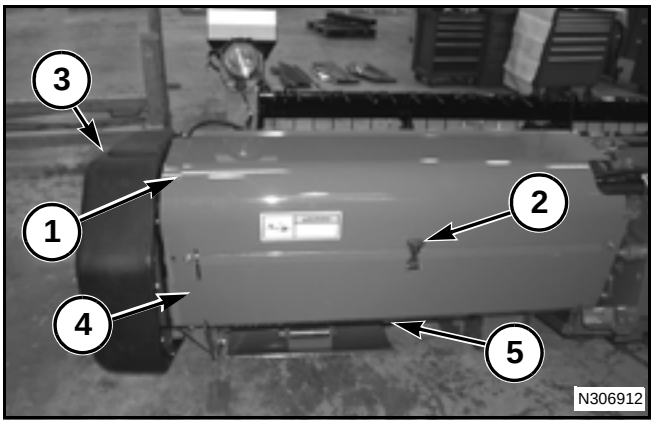

FIG. 9

FIG. 10: To open the top right-hand drive shield (1), pull the rubber latch (2) out of the catch. Lower the right-hand drive shield all the way.

NOTE: Make sure the end shield (3) is down before opening the drive shield.

To open the bottom left-hand drive shield (4), open the top left-hand drive shield. Pull the rubber latch (5) out of the catch. Raise the bottom left-hand drive shield all the way.

To close a drive shield, put the drive shield in the closed position. Install the rubber latch in the catch.

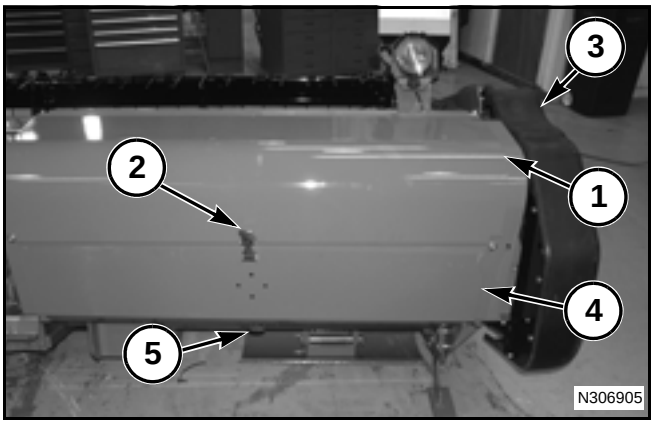

FIG. 10

BOLT TORQUE VALUES

All bolts used on this machine are Grade 5 plated bolts unless specified as a higher grade. Always replace bolts with Grade 5 hardware except where higher grades are specified. All Grade 5 bolts have three radial marks on the bolt head.

Tighten all hardware according to the following charts unless specified differently in the manual. Do not over tighten bolts as this can cause a bolt to fail during operation.

Standard Bolt Torque Chart

Bolt Size	Grade 2		Grade 5		Grade 8	
	Nm	Lbf ft	Nm	Lbf ft	Nm	Lbf ft
5/16-18	15	11	24	17	33	25
3/8-16	27	20	42	31	59	44
7/16-14	43	32	67	49	95	70
1/2-13	66	49	105	76	145	105
9/16-12	95	70	150	110	210	155
5/8-11	130	97	205	150	285	210
3/4-10	235	170	360	265	510	375
7/8-9	225	165	585	430	820	605
1-8	340	250	875	645	1230	910

Standard Bolt Identification

Grade 2 No Marks | Grade 5 3 Marks | Grade 8 6 Marks

Metric Bolt Torque Chart

Bolt Size	Class 5.8		Class 8.8		Class 10.9	
	Nm	Lbf ft	Nm	Lbf ft	Nm	Lbf ft
M 5 x 0.8	4	3	6	5	9	7
M 6 x 1	7	5	11	8	15	11
M 8 x 1.25	17	12	26	19	36	27
M 10 x 1.5	33	24	52	39	72	53
M 12 x 1.75	58	42	91	67	125	93
M 14 x 2	92	68	145	105	200	150
M 16 x 2	145	105	225	165	315	230
M 18 x 2.5	195	145	310	230	405	300
M 20 x 2.5	280	205	440	325	610	450
M 24 x 3	480	355	760	560	1050	780

Identify metric bolts by the class number stamped on the bolt head or nut. Higher numbers indicate higher strength.

BEARING REPLACEMENT

FIG. 11: The bearing (1) is held in position on the shaft by a locking collar (2). The locking collar has an eccentric counterbore that engages the eccentric end of the bearing inner race (3) when the locking collar is rotated.

The locking collar is rotated by hitting a drift punch inserted in the drift pin hole (4). The assembly grips the shaft tightly with a positive locking action that increases with use.

A set screw (5) in the locking collar engages the shaft when tightened and applies additional locking pressure.

To replace a bearing:

- Loosen the set screw in the locking collar.
- Loosen the locking collar with a drift punch. Rotate the locking collar opposite the direction of normal shaft rotation until free from the bearing. Remove the locking collar from the bearing and shaft.
- Support the shaft and remove the bolts fastening the bearing flanges to the structure. Slide the bearing and the bearing flanges from the shaft.

NOTE: Removing paint and corrosion from the shaft will make removal easier.

- Put the new bearing and bearing flanges on the shaft. Make sure the bearing inner race is facing the correct direction. Install the bolts that fasten the bearing flanges to the structure. Make sure the bearing is straight within the bearing flanges. Tighten the bolts evenly.
- Put the locking collar on the shaft and push the locking collar against the bearing inner race. Rotate the locking collar in the direction of normal shaft rotation until tightly engaged. Tighten the locking collar with a drift punch.

NOTE: Always tighten the locking collar in the direction of normal shaft rotation.

- Tighten the set screw in the locking collar. Use the following chart for the set screw torque.

Set Screw Size	Nm	lbf in
1/4-20	4.8	78
5/16-18	18	156
3/8-16	31	273
7/16-14	49	428

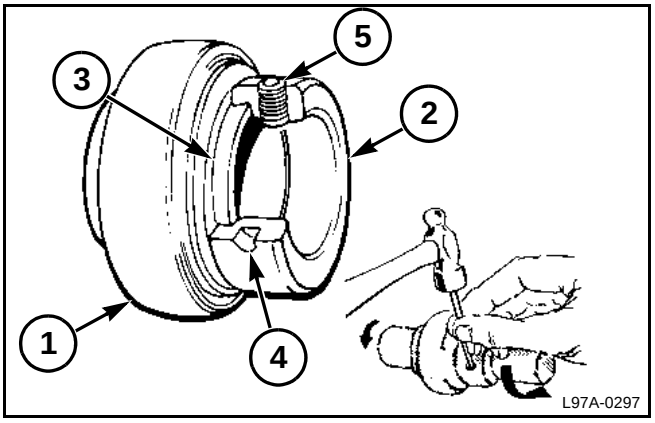

FIG. 11