

**MASSEY FERGUSON**

# MF 3200

Series Corn Header

Models: 3206 / 3206C / 3212F / 3212FC



# SERVICE MANUAL

FROM MASSEY FERGUSON

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## 1.1 General information

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### 1.1.1 Introduction to this service manual

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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.

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### 1.1.2 Units of measurement

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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.

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### 1.1.3 Table of contents

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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.

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### 1.1.4 Page numbers

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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.

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### 1.1.5 Intended use

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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.

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### 1.1.6 Proper disposal of waste

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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.

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Read and follow instructions each and each time you use a chemical.

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

Tell all person who comes go near with chemicals of the possible dangerous results and the safety precautions that are necessary.

Stay upwind and away from smoke from a chemical fire.

Store or discard all chemicals that are not used only in the procedure specified by the chemical manufacturer.

## 1.8 Troubleshooting

A large quantity of ears are between the auger and feeder	
Cause(s)	Solution(s)
Incorrect adjustments: threshing component speed, concave clearance or angle of the feeder front face	Make sure that the combine is adjusted correctly.

In-laid or lodged corn stalks	
Cause(s)	Solution(s)
The stalks do not feed correctly into the snapping rolls	Remove only one ear saver per row initially, then second ear saver, if it is necessary

Row unit becomes plugged while harvesting laid or lodged cornstalks	
Cause(s)	Solution(s)
Incorrect tension on the gathering chain	Do a check of the tension on the gathering chain

Stalks, grass or weeds on the snapping roll	
Cause(s)	Solution(s)
Too much of a gap in the vine knives	Reduce gap of vine knives

Auger does not turn	
Cause(s)	Solution(s)
Incorrect auger drive torque limiting clutch	Do a check of the setting of the auger drive torque limiting clutch

Ears are broken or split in the auger	
Cause(s)	Solution(s)
Rotational speed of the auger is too fast	Reduce the rotational speed of the auger using the optional sprocket

Corn header does not stay correctly on the row	
Cause(s)	Solution(s)
The corn header row spacing is not the same as the corn row spacing	Make sure that corn header row spacing is the same as the corn row spacing.

## 2.1 Auger

### 2.1.1 Remove the auger safety clutch

#### Procedure

1. Park the machine on a solid, level surface.
2. Raise the header all the way up.
3. Apply the park brake, stop the engine, and take the key with you.
4. Engage the lift cylinder stop.
5. Loosen the hardware (1) .
6. Remove the drive chain (2).
7. Remove the retaining ring (3).
8. Remove the auger safety clutch (4).

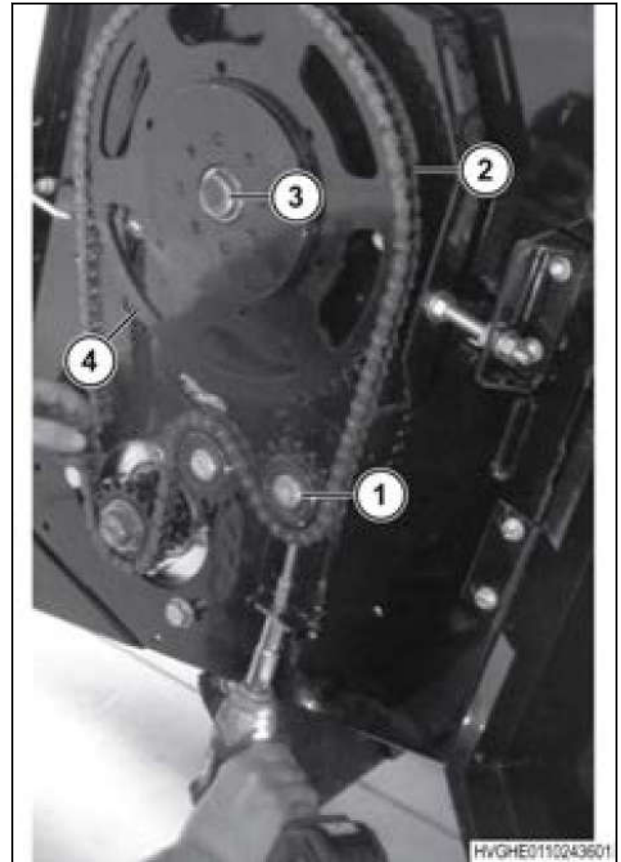


Fig. 1

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7. Remove the clutch half (1).
8. Remove the spring (2).

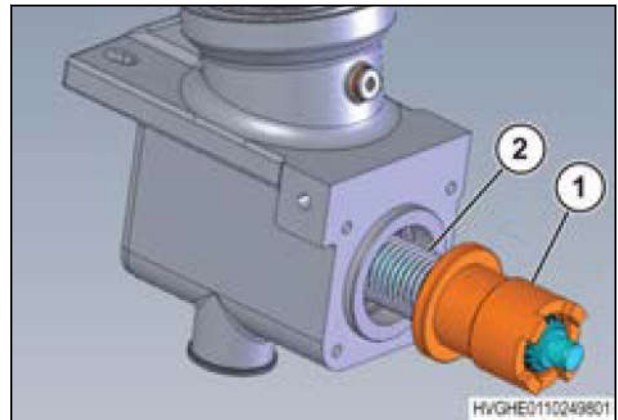


Fig. 22

9. Remove the hub (1) and bearings (2)(3) as an assembly.
10. Remove the bearings from the hub .

**NOTE:** *There is a retaining ring between the two bearings on the outside of the hub.*

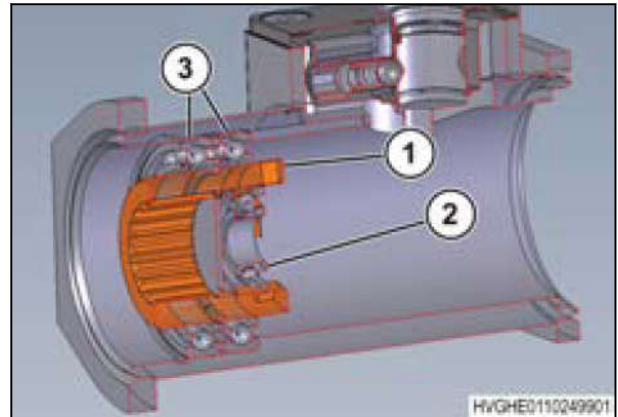


Fig. 23

#### 4.3.4 Install the first bearing for the stalk chopper

##### Procedure

1. Install the bearings (2)(3) onto the hub (1). Make sure there is a retaining ring between the two bearings on the outside of the hub.
2. Install the hub and bearings as an assembly into the housing.

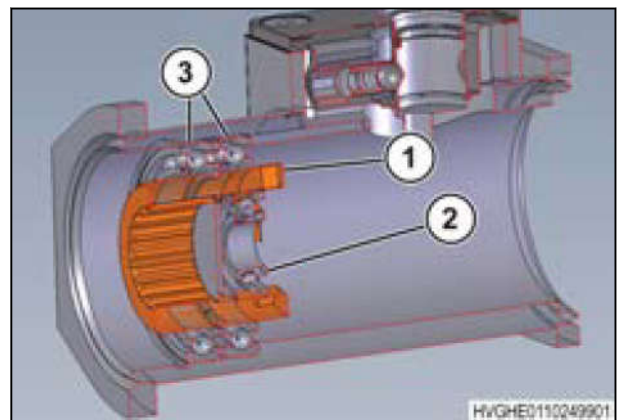


Fig. 24

7. Remove the eight hex head bolts (1) from the outer frame.

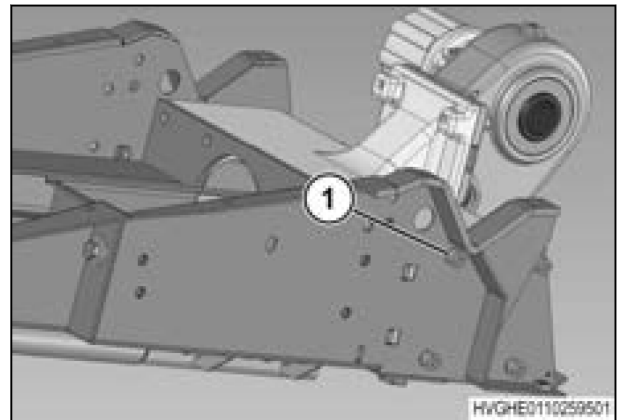


Fig. 56

8. Push down on the input gearbox (1), and remove the snapping unit gearbox from the frame.

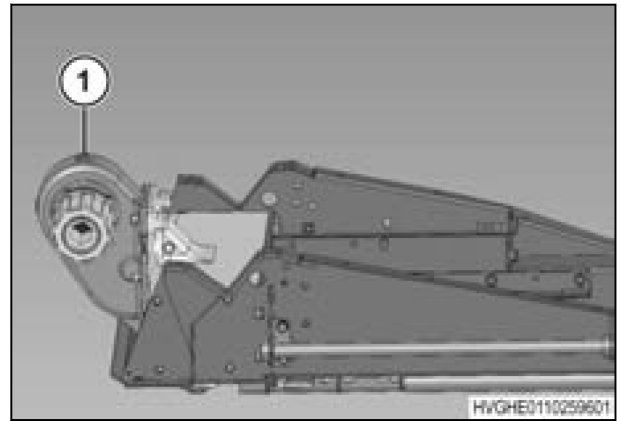


Fig. 57

#### 4.4.2 Install the snapping unit gearbox

##### Procedure

1. Install the snapping unit gearbox and lift up on the input gearbox (1) to correctly position it in the frame.

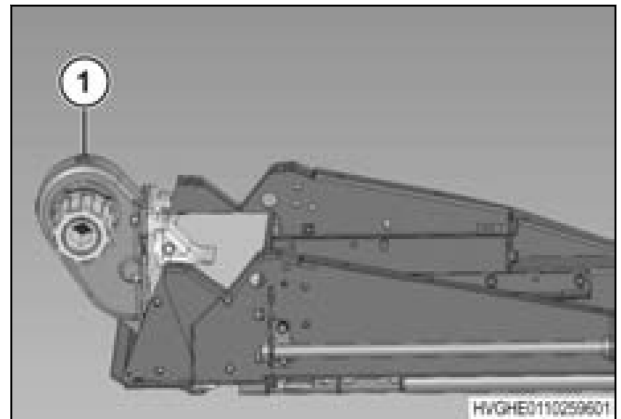


Fig. 58

11. Install the bearing (2).
12. Install the retaining ring (1).

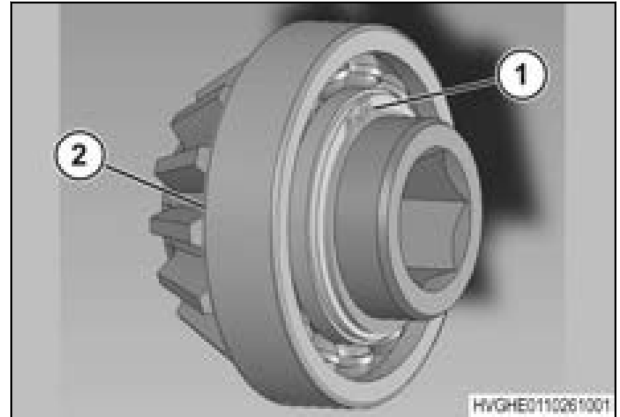


Fig. 92

13. Install the gear and the bearing assembly (1).

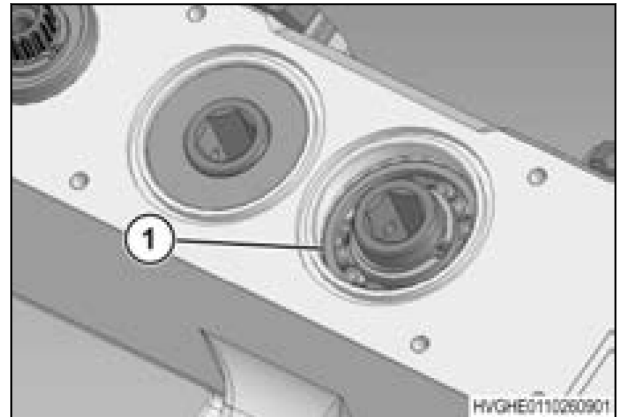


Fig. 93

14. Align the flat sides of the hex bores, so they are parallel.

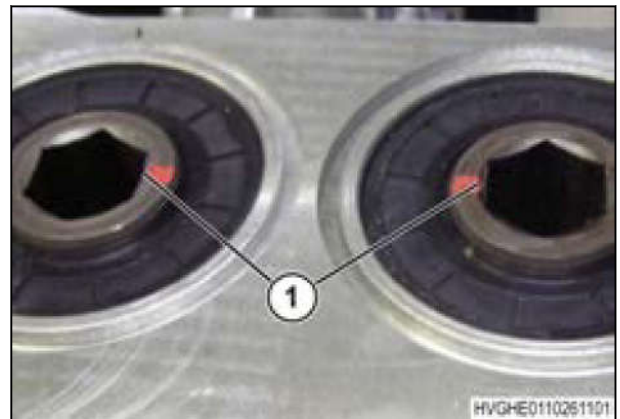


Fig. 94

15. Install the large retaining ring (1).

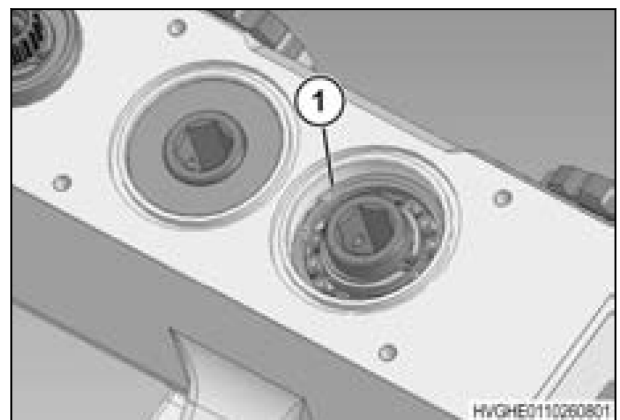


Fig. 95

5. Remove the chain (1).
6. Remove the retaining ring (2).
7. Remove the lower sprocket (3).

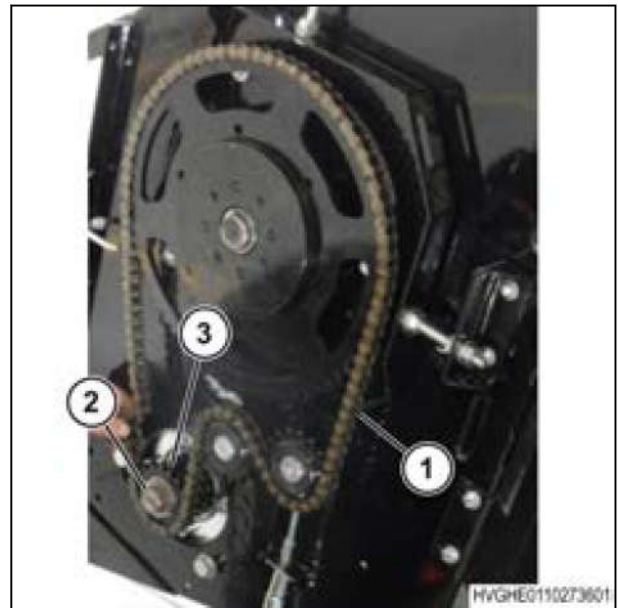


Fig. 128

8. Remove the coupling chain (1).
9. Loosen the set screws (2).
10. Remove the clamps (3).

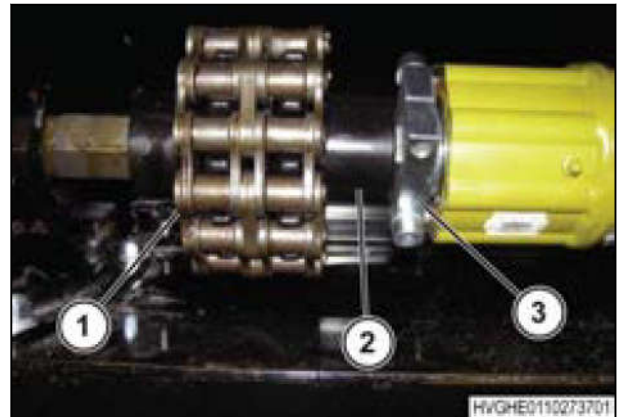


Fig. 129

11. Remove any rust and apply lubrication to the hex shaft (1).
12. Make note of all the locations of the sprockets and spacers.
13. Remove the hex shaft.



Fig. 130

#### 4.4.12 Install the hex shaft

##### Procedure

1. Park the machine on a solid, level surface.
2. Raise the header all the way up.
3. Apply the parking brake, stop the engine, and take the key with you.

3. Install the retaining ring.
4. Install both seals (1) with a screwdriver.

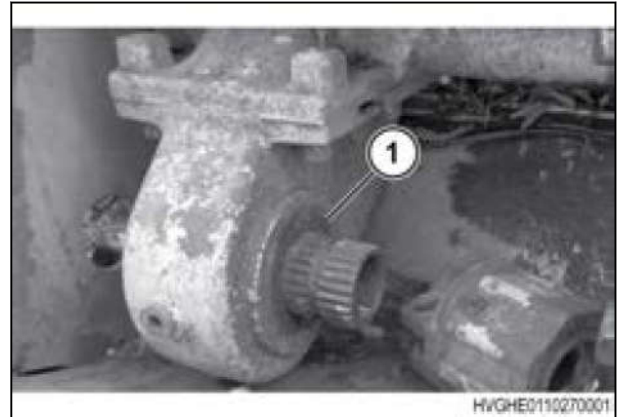


Fig. 160

5. Install the safety clutch (1).
6. Install the hex shafts and drive shields.
7. Disengage the lift cylinder stops.
8. Start the machine.
9. Lower the header.
10. Fill the gearbox with the correct lubricant.



Fig. 161

#### 4.4.19 Remove the snapping unit

##### Procedure

1. Park the machine on a solid, level surface.
2. Raise the header all the way up.
3. Apply the park brake, stop the engine, and take the key with you.
4. Engage the lift cylinder stop.
5. Remove the necessary drive shields and hex shafts.
6. Remove the brackets (1) from both sides of the snapping unit.

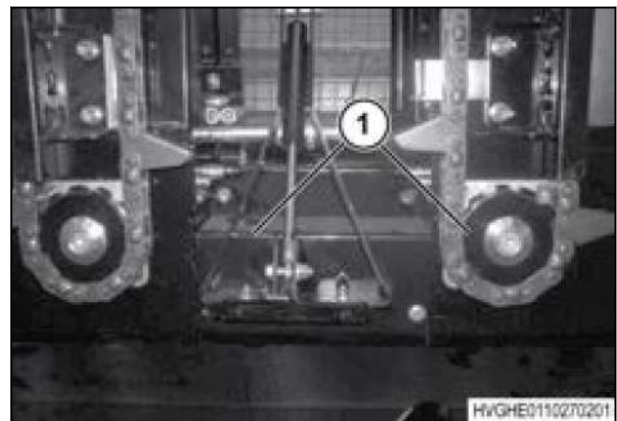


Fig. 162

### 4.6.9 Calibrate the automatic header height control (AHHC)

#### Procedure

1. Measure the electronic sensor voltages.

Ground (1)	Input (2)	Maximum output (3)	Minimum out (3)
0V	5V	4V	1V

2. Record the output voltage of the sensor assembly in the full down (hanging) position. This must have the maximum voltage of 4V.
3. Record the output voltage of the sensor assembly in the full up position against the stop bolt. This must have the minimum voltage of 1V.
4. If the voltage is more than than 4V, remove the bolt from the open end of the sensor shaft.
5. Carefully turn the shaft 180°. If the shaft does not turn easily, remove the electronic sensor and index to the open shaft internally.
6. Install the bolt.
7. Record the two output voltages again.
8. If necessary, adjust the maximum voltage by turning the electronic sensor using the slot holes (1).

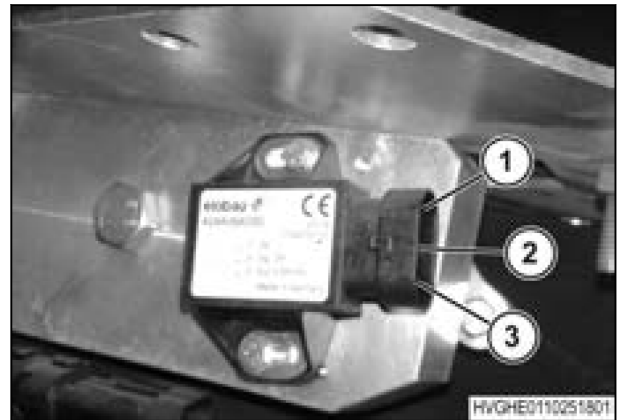


Fig. 191



Fig. 192

9. If necessary, adjust the maximum voltage by changing the length of the globe joint and rod assembly (A).
10. Record the minimum voltage again. If necessary, adjust using the stop bolt.

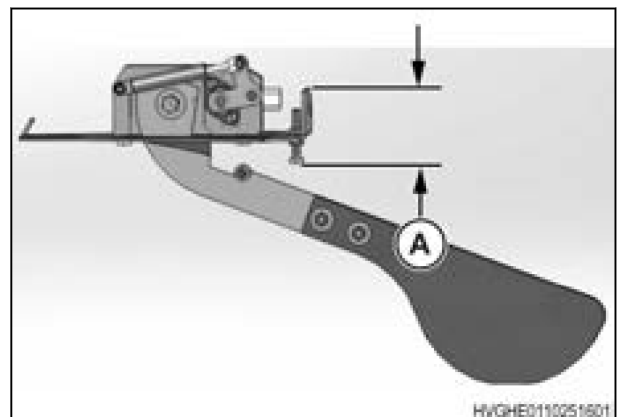


Fig. 193



- (6) Hydraulic cylinder opens and closes the snapping plates
- (7) Hydraulic cylinder lifts and lowers the wings
- (8) Hydraulic cylinder lifts and lowers the wings
- (9) Hydraulic cylinder locks and unlocks wings
- (10) Hydraulic cylinder locks and unlocks wings
- (11) Hydraulic cylinder lifts and lowers the plastic covers
- (12) Hydraulic cylinder lifts and lowers the plastic covers
- (13) Open check valve when cylinder (8) is extended
- (14) Open check valve when cylinder (7) is extended

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