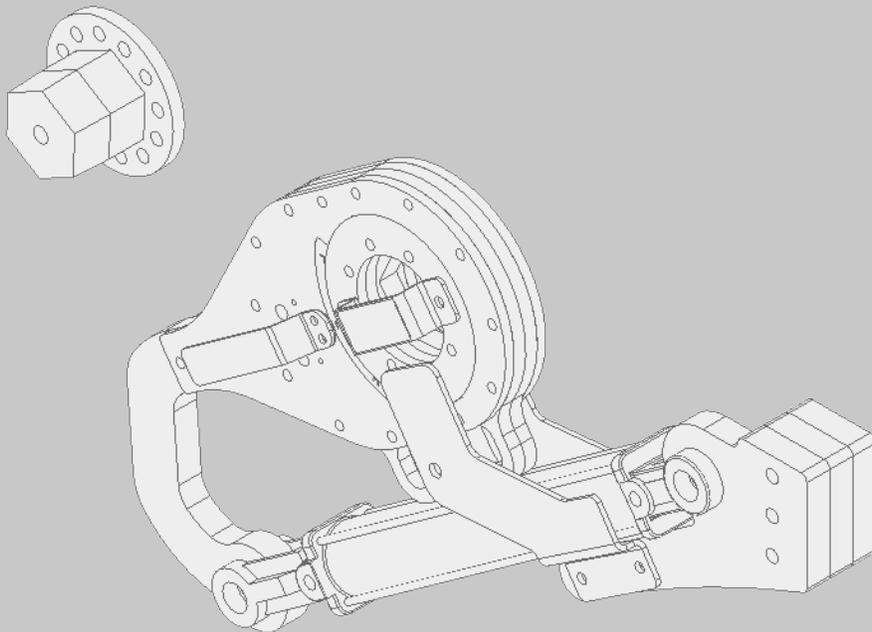


Reverser designed for CAT Claas Lexion Series Combines

AI-100LEXION

INSTALLATION & OPERATOR'S MANUAL



Limited Warranty

ARNOLD INNOVATIONS LIMITED warrants to the original buyer that new product is free from defects in materials and workmanship.

This warranty is only valid for one year after date of delivery to original buyer. ARNOLD INNOVATIONS LIMITED is liable only to repair or replace the product.

Written notice must be provided to

ARNOLD INNOVATIONS LIMITED,
Box 299 Hamiota
Manitoba R0M 0T0

within 5 business days after the defect has been made apparent. Pictures of the defect may be required at the request of ARNOLD INNOVATIONS LIMITED.

Warranty does not extend to subsequent buyers.

Warranty is null and void if the equipment is changed, altered or modified by any party other than ARNOLD INNOVATIONS LIMITED or installed in a manner inconsistent with this manual.

This product has been specifically designed and manufactured to be used on Claas Lexion Series CAT combine harvesters. Use of this product in any other way than stated will void this warranty.

This warranty is limited to the terms stated above. ARNOLD INNOVATIONS LIMITED disclaims all liability for incidental or consequential damages, and in no event shall ARNOLD INNOVATIONS LIMITED be liable to the original buyer more than the purchase price paid by the original buyer for the product.

The original buyer uses this product at his own risk. Failure to follow the installation and operation instructions in this manual and failure to follow the recommended safety procedures and warnings may result in injury or death. ARNOLD INNOVATIONS LIMITED shall not be held liable for damages suffered by the original buyer or any third party and arising from the use or misuse of this product or from the failure to follow the instructions in this manual.

Hydraulic components are not warranted (Including hoses)

READ THIS MANUAL IN FULL BEFORE INSTALLING OR OPERATING THIS PRODUCT

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1. SAFETY

1.1 SAFETY ALERT SYMBOL

This symbol indicates an important safety message in the Manual and safety decals on the machine.

When you see this symbol:

- PAY ATTENTION
- BE ALERT
- YOUR SAFETY IS INVOLVED

Read messages carefully and follow all messages accompanying this symbol.



Prevent ACCIDENTS that DISABLE and KILL
SAFETY IS IMPORTANT TO YOU

1.1.1 SIGNAL WORDS



DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. It is also used to alert against unsafe practices.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor to moderate injury. It is also used as a reminder of good safety practices.

1.1.2 SAFETY DECALS

These safety decals appear on the reverser.
 Keep decals clean and legible at all times.
 Replace missing and damaged decals immediately
 Ensure replacement parts have the same decals as original parts.
 Decals are available from your dealership or Arnold Innovations parts department.



1.1.3 INSTALLATION OF SAFETY DECALS

Ensure the area where the decal is to be placed is clean and free from dirt and oil.

Remove decal backing paper and apply to original location.

1.2 GENERAL SAFETY



CAUTION

The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.

Protect yourself. Wear all the protective clothing and personal safety devices that COULD be necessary for the job at hand when assembling, operating and servicing machinery. Don't take chances.

You may need:

- Hard Hat
- Protective foot wear, protective gloves, high visibility vest safety glass, face shield, ear defenders
- Respirator or filter mask
- Provide a first aid kit for emergency use. If possible, have someone trained in first aid and CPR
- Have fire extinguishers on machinery. Make sure extinguishers are regularly maintained and be familiar in their operation.
- Keep children away from machinery at all times
- Avoid working when fatigued
- Wear close fitting clothing, keep long hair tied up. Don't wear scarves or dangling jewelry when operating machinery.



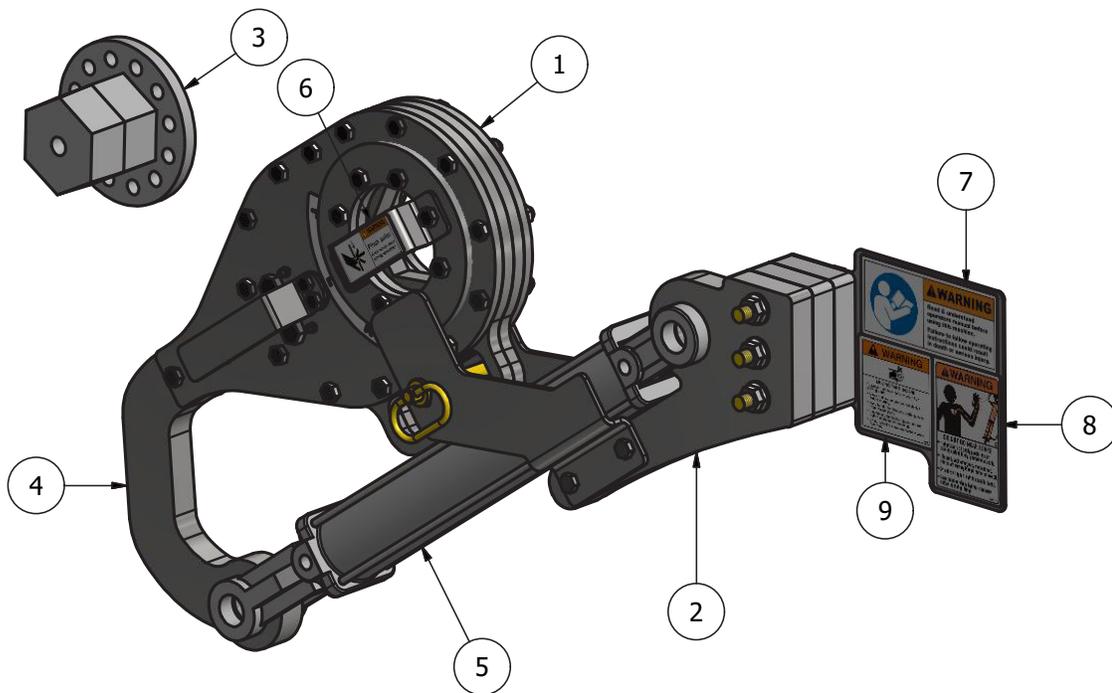
1.3 SAFETY PRECAUTIONS WHEN OPERATING REVERSER

- Read Operator's Manual
- Wear protective eye goggles
- Wear hard hat
- Wear protective steel toed footwear
- Keep a copy of this manual in the combine

Note: Additional copies of the manual may be ordered from Arnold Innovations.

2. PARTS LIST

PARTS LIST		
PART NUMBER	DESCRIPTION	ITEM
10CAT01	Ratchet Head Assembly	1
10CAT02	Mount Assembly	2
20CAT01	Hub	3
20CAT02	Arm	4
30HC001	Hydraulic Cylinder-2" Bore, 1 1/8" Rod, 14" Travel	5
30-00002	Sticker- Pinch point	6
30-00003	Sticker- Read Owners Manual	7
30-00004	Sticker- High Pressure Oil	8
30-00005	Sticker- Rotating Parts	9
30-00006	Single Spool Directional Control Valve Kit	10
30-00007	NPT 1/2" Shut Off Ball Valve	11
30-00008	Seal Kit for 30HC001 (not included service part only)	12
30-00009	Sticker- AI-100LEXION	13
30-00010	Sticker- Rotating Hub	14
30-00011	Pressure Compensator Kit	15



3. INSTALLATION

3.1 MOUNTING BRACKET



9.5"

Note: installation process is easier with two people.

Install mounting bracket on the right hand front side of the combine frame. You will need to drill three (3) 1/2" holes. The center hole should be 9.5" from the plate above it as shown.

Once you have the first hole drilled, use the bracket as a template to drill the remaining holes.



3.2 BRACKET AND HYDRAULIC CYLINDER

Insert the bolts provided and install the spacer plates and warning flag as shown.

Install the main bracket and hydraulic cylinder. Tighten the bolts.



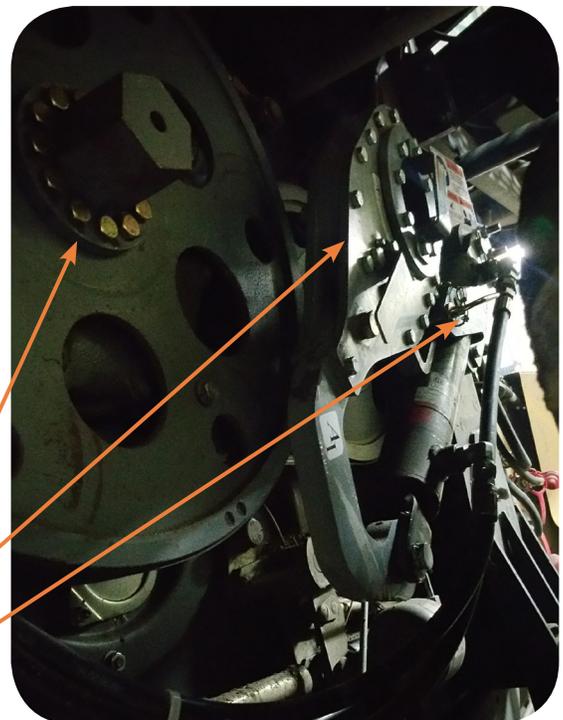
Main Bracket
Hydraulic Cylinder

3.3 RATCHET HEAD AND HUB

Install the ratchet head assembly, retaining pin.

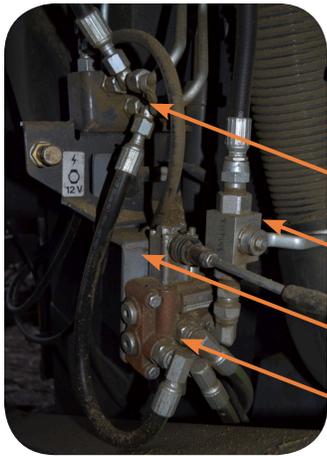
Install Hub with grade 10 bolts supplied.

Hub
Ratchet Head
Retaining Pin



3.4 SPOOL AND SHUT-OFF VALVE

3.4.1 LOW PRESSURE UNIT (400, 500, 700 Series)



- Install spool valve and shut off valve with bracket supplied.
- Tap into the hydraulic system using the hydraulic tees provided

Din Hydraulic Tees

Shut-Off Valve

Bracket

Spool Valve

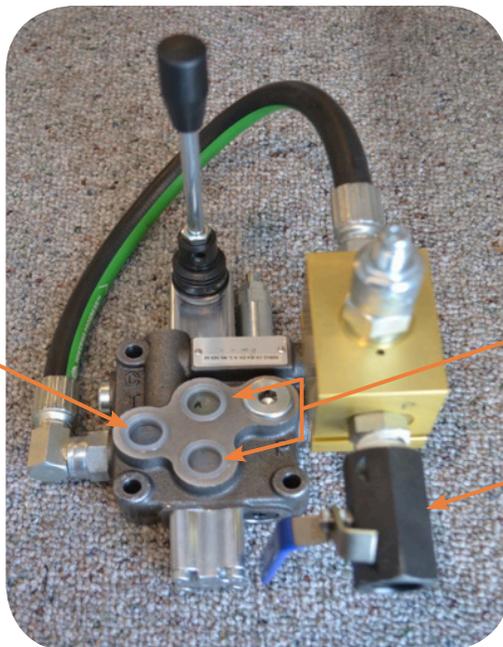
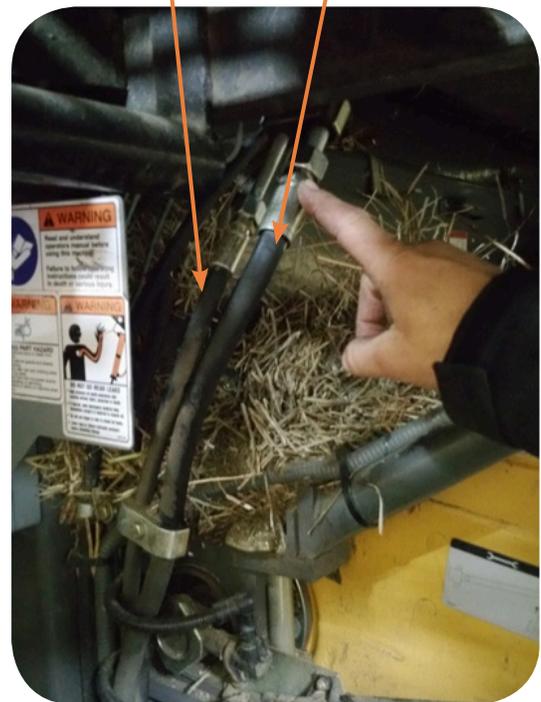
3.4.2 HIGH PRESSURE UNIT (500, 700 Series)

High pressure kits have an additional pressure reducing valve and hydraulic lines and tees to tap into the high pressure circuit as indicated.

- Install Valve assembly onto bracket
- Install onto combine using hardware provided
- Tee into the high pressure line and return line located under the front right corner of the cab

High Pressure Line

Return

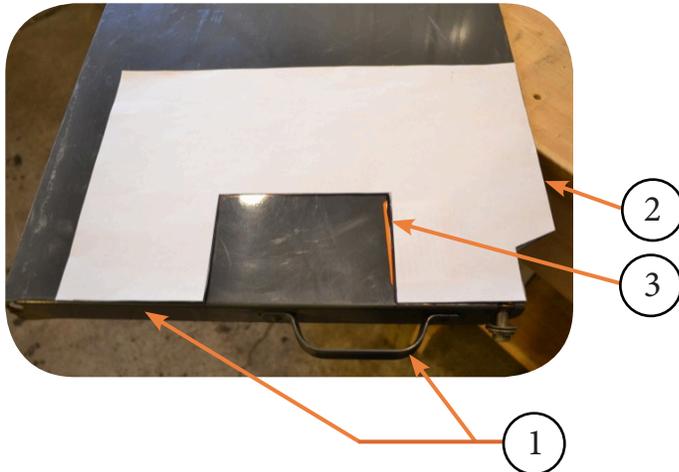


Return

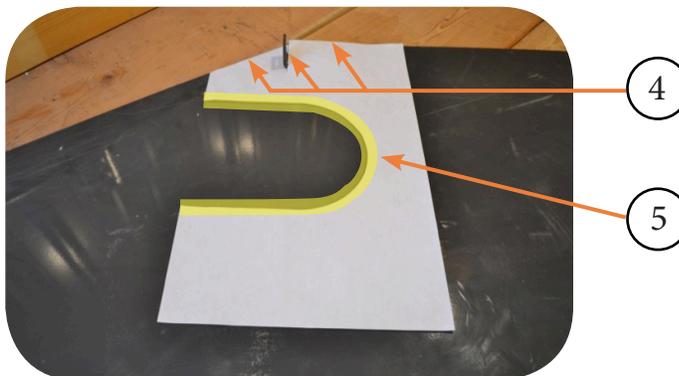
Service lines to hydraulic cylinder

Shut-off valve

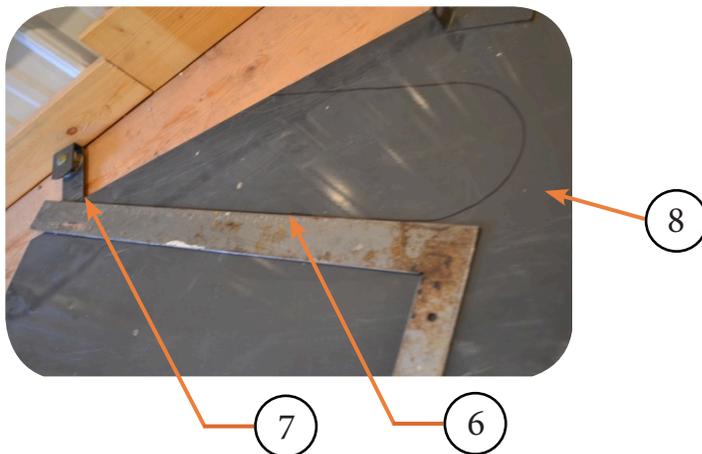
3.5 SHIELD MODIFICATION



1. Remove the handle and relocate lower.
2. Line the template up with the front of the shield as shown.
3. Mark the shield along the edges of the template and cut out the square.



4. Cut the template around the bracket and align it to the top two edges of the shield as shown.
5. Mark the shield around the highlighted edges being careful to keep the template in place.



6. Continue to mark the shield using a straightedge as shown.
7. Remove bracket and cut along marked line.
8. Place rotational hazard sticker. With a roller, paint all cut edges with Lexion Grey to prevent corrosion.

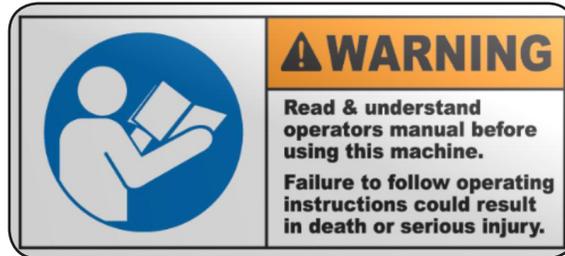
3.6 COMPLETING INSTALLATION

Tie the hydraulic lines together so that they stay clear of the wheel coming up under the shield attached to the returns elevator. Particular attention should be taken in the area close to the spool valve.



4. OPERATION

READ OPERATORS MANUAL BEFORE OPERATING



WARNING

Ensure combine park brake is applied and thresher components come to a complete stop before beginning the de-slug procedure.

4.1 PRE-OPERATION

1. **Lower the concave fully.** Failure to do so could cause serious damage to the reverser or the combine.

2. Attach Ratchet

- Open the side shield and attach the ratchet by approaching from behind the rear wheel.
- Remove the retaining pin from the ratchet head.
- With the ratchet head direction lever set in reverse, lift the ratchet head and attach it to the hub. It may be necessary to turn the ratchet to align it with the hub.
- Ensure the ratchet head is pushed as close to the pulley as possible to prevent the ratchet from becoming disconnected when in use.



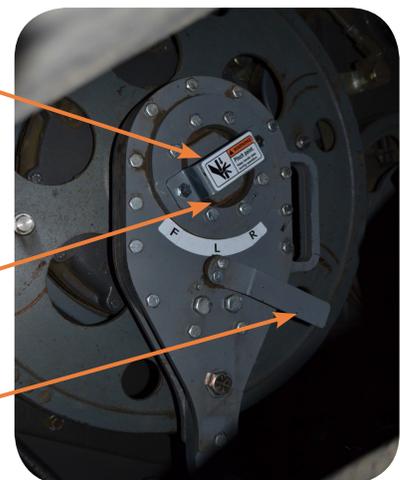
CAUTION

Be careful not to pinch your fingers while aligning ratchet head. Ensure ratchet head is fully engaged with combine cylinder before letting go of the handle.

Handle used to align ratchet

Ratchet attached to Hub

Direction selection lever



4.2 OPERATION



WARNING

High Pressure Fluid Hazard. Wear protective eye-ware and gloves when operating reverser.

WARNING

Moving Parts Hazard. Keep clear of reverser while operating.

WARNING

Pinch Point. Do not put hands between cylinder and concave.

FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY OR DEATH

1. Set Direction Selection Lever.

- With the direction lever in the center position the ratchet is locked. This allows a slug to be rocked on the spot which will break it up and make reversing quicker.
- With the direction lever in the reverse position the cylinder will reverse.
- With the direction lever in the forward position the cylinder will turn forward



2. Open the Hydraulic Shut-Off Valve.

When the reverser is attached and you are ready to operate it, open the shut-off valve. Be alert for leaks. Do not use hands or bare skin to find leaks as high pressure hydraulic leaks can penetrate skin and enter the blood stream, leading to DEATH. Wear proper eye protection.

Hydraulic shut-off valve

Spool valve lever

3. Operating the Reverser with Spool Valve.

When the reverser is attached and the shut-off valve is open, you are ready to operate the reverser. Stand back from the reverser by the spool valve, next to the clean grain elevator. From here it is possible to see all three thrashing component shafts turning. Keep clear while operating the reverser.

4. Changing the Direction of the Ratchet

- Close shut-off valve
- Set direction selection lever
- Open shut-off valve



WARNING

Do not attempt to change the direction of the ratchet without first closing the shut-off valve.

WARNING

Do not pull crop from stone trap while operating reverser.

Always close shut-off valve before removing crop from stone trap area.

4.3 AFTER OPERATION

1. Fully Retract Cylinder

When you are finished with the reverser you will need to operate the spool valve so that the reverser's actuating hydraulic cylinder is fully retracted.



2. Close Shut-off Valve

Hydraulic shut-off valve (closed)

3. Return Reverser to Cradle

Remove the reverser from the hub and set it back in the cradle. Reinstall the retaining pin.

Ratchet head replaced in cradle

Retaining pin reinstalled



4. Reinstall Shield

To reinstall shield it will require two cut outs. Using the included template, cut shield and reinstall. Install sticker close to Hub.

5. ON/OFF Switch Installation (500 Series only)

500 Series Combines will require the ON/OFF switch to be installed in place of the momentary factory switch on the left hand side of the combine when using the high pressure kit.

Turn the switch on when using the reverser and off when you are finished.

5. MAINTENANCE

1. Ratchet Head

Grease yearly and after washing. Avoid pressure washing ratchet head directly.

2. Hydraulic Lines and Connections

Inspect hydraulic lines and connections for leaks and wear. Replace worn or leaking hoses before operating.

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