Operator's Manual

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GERINGHOFF

Limited Warranty

Effective 11/01/2011

LIMITED WARRANTY FOR GERINGHOFF AGRICULTURAL PRODUCTS
(US & CANADA ONLY)

A. GENERAL PROVISIONS - With respect to purchasers in the United States and Canada, The warranties described below are provided by Geringhoff to the original purchasers of new Agricultural Equipment and parts thereof ("Equipment") purchased from Geringhoff or authorized Geringhoff dealers (the "selling Dealer"). These warranties apply only to Equipment intended for sale in Canada and the US. Under these warranties, Geringhoff will repair or replace, at its option, any part covered under these warranties which is found to be defective in material or workmanship during the applicable warranty term. Warranty service must be performed by a dealer or service center located in Canada or the US, and authorized by Geringhoff to sell and/or service the type of Equipment involved (the "authorized dealer"). The authorized dealer will use only new or remanufactured parts or components furnished or approved by Geringhoff. Warranty service will be performed without charge to the purchaser for parts and/or labor where applicable. However, the purchaser will be responsible for any service call and/or transportation of Equipment to and from the authorized dealer's place of business (except where prohibited by law), for any premium charged for overtime labor requested by the purchaser and for any service and/or maintenance not directly related to any defect covered under these warranties. These warranties are not transferable to subsequent owners of the equipment.

B. WHAT IS WARRANTED AND REGISTRATION REQUIREMENTS - Subject to paragraph C, all parts of any new Equipment are warranted for the number of months specified below. Each warranty term begins on the date of delivery of the Equipment to the purchaser. Harvesting products may have a delayed warranty start date, but only if established by Geringhoff and noted by the selling dealer on the Retail contract and identified on the Warranty Registration Certificate which must be submitted to Geringhoff or completed online at www.crm.geringhoff.com no later than 30 days after the Equipment's occasion of first use. Absence of these requirements shall deem the warranty term to start immediately upon delivery to the purchaser.

C. (I) ITEMS COVERED SEPARATELY - (1) Any equipment that is not supplied directly by Geringhoff shall not be covered by this Warranty. This equipment might include (but not be limited to), HeadSight auto header height control.

(II) WHAT IS NOT WARRANTED - Pursuant to the terms of these warranties, Geringhoff IS NOT RESPONSIBLE FOR THE FOLLOWING: (1) Used Equipment; (2) Any Equipment that has been altered or modified in ways not approved by Geringhoff or with modifications not performed by an authorized Geringhoff dealer or authorized Geringhoff representative. (3) Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions/recommendations; misuse, lack of proper protection during storage, vandalism, the elements or collision or accident; This exclusion applies specifically to gearboxes or any components which the Equipment operator has been deemed to have allowed to engage without sufficient lubrication or without sufficient refreshments and changes of lubrication as specified in the Equipment Operators manual. (4) Normal maintenance parts and/or service, including but not limited to cutting components, chains, standard wear items or potentially, poly components such as dividers and bonnets which have been deemed to have suffered damage by impact or excessive ground engagement.

D. SECURING WARRANTY SERVICE - To secure warranty service the purchaser must, (1) report the Equipment defect to an authorized dealer and request warranty service within the applicable warranty term; (2) present evidence of the warranty start date with valid proof of purchase; and, (3) make the Equipment available to the authorized dealer within a reasonable period of time at the dealers place of business unless that dealer offers to travel to the customers location to complete the warranty service in which case, travel expense shall be the sole responsibility of the dealer and not eligible for reimbursement by Geringhoff

E. NO IMPLIED WARRANTY, REPRESENTATION OR CONDITION - To the extent permitted by law, neither Geringhoff nor any company affiliated with it makes any warranties, representations, conditions or promises express or implied as to the quality, performance or freedom from defect of the Equipment covered by these warranties other than those set forth above.

IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT APPLICABLE, SHALL BE LIMITED IN DURATION TO THE APPLICABLE PERIOD OF WARRANTY SET FORTH ON THIS PAGE. THE PURCHASER'S ONLY REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON GERINGHOFF EQUIPMENT ARE THOSE SET FORTH ON THIS PAGE. IN NO EVENT WILL THE DEALER, GERINGHOFF OR ANY COMPANY AFFILIATED WITH GERINGHOFF BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. (Note: Some jurisdictions do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of
incidental or consequential damages so the above limitations and exclusions may not apply to you.) In the event the above warranty fails to correct purchaser's performance problems caused by defects in workmanship and/or materials, purchaser's exclusive remedy shall be limited to payment by Geringhoff of actual damages in an amount not to exceed the amount paid for the product. This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

F. NO DEALER WARRANTY - THE DEALER DOES NOT HAVE AUTHORITY TO MAKE ANY WARRANTY, REPRESENTATION, CONDITION OR PROMISE ON BEHALF OF GERINGHOFF, OR TO MODIFY THE TERMS OR LIMITATIONS OF THIS WARRANTY IN ANY WAY.

G. DEALER RESPONSIBILITY - The Dealer shall be required to seek and gain pre-approval on all warranty claims before starting work on the Equipment. Photographs should be taken, retained and submitted of defective components and any parts or components removed shall become the property of Geringhoff and must be retained by the Dealer for a minimum of 90 days.

AGRICULTURAL EQUIPMENT WARRANTIES, AGRICULTURAL EQUIPMENT WARRANTY TERM
12 months on parts and 12 months on labor. An additional bonus 12 months on parts (24 months total) shall be extended to those who complete and submit a Warranty Registration Certificate as per the requirements of clause B above

Wear Items: A replacement part will be furnished without charge if breakage occurs and the amount of wear is less than the wear limits established by Geringhoff from time to time. Labor reimbursement for removal and installation or subsequent adjustment of the wear item shall not be provided. Geringhoff may require defective components to be returned to the Dealer or Geringhoff directly.

Section 1 - Getting Started

Introduction 1
Warnings and safety information 2
Torque specifications 5

Notes

We thank you for the confidence placed in us when you made the decision to purchase this Geringhoff corn header.

On this page you'll find some important information for using these operating instructions:

- When using the operating instructions, we recommend also using the spare parts catalog. These documents will provide an in-depth understanding.
- Note the specific identification of your machine in the fields provided below. This information will make it easier for your dealer or Geringhoff to provide assistance.

  Model: _____

  Serial number:_____

  Key-code: _____

  Year of construction: _____

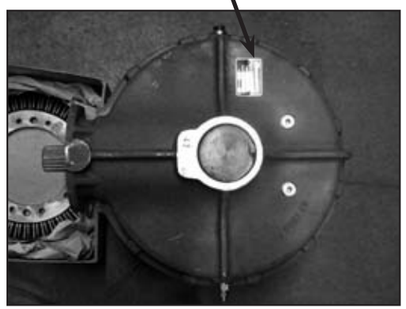
  Row distance: _____

  Working width/number of row units: _____

  Combine Brand/Model: _____
- The machine information plate is on the left side of the machine frame.
- Right and left always indicates towards travel and/or working direction.
- If you are in need of spare parts, keep the required data available and get in touch with your dealer.
- Use only original Geringhoff spare parts.
- Ensure that the completed Warranty Registration document is sent to the manufacturer. This information is very important for potential claims. Failure to register warranty documents may void warranty claims.
- **Do not make any modifications of important, load-bearing and safety-relevant elements.** The manufacturer does not assume any guarantee for damages or injury resulting from unauthorized modification.

2011 and earlier

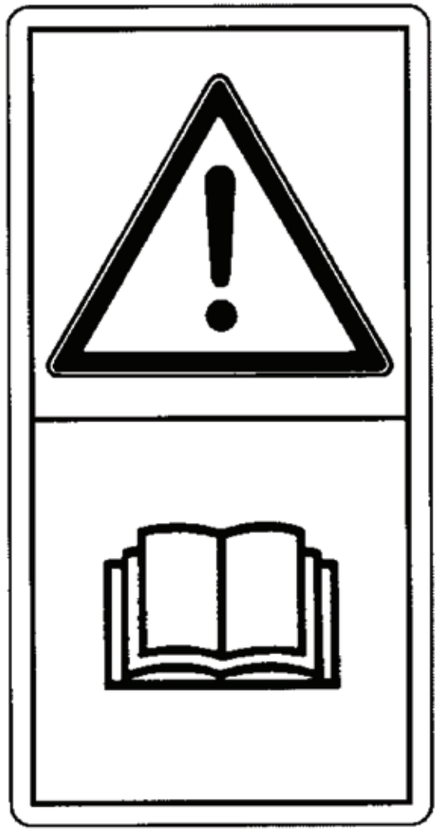
2012



Serial Numbers						
Type of Header	Build Year	Serial Number	Header Size	Type Number	Type Shortcut	Type Description
xxx	xx	xxxx	x..x	Corn Header		
101	12	0079	1230	101	MS/NS	Mais Star/North Star
				110	RD	RotaDisc
				301	SunStar	Sunflower Row Cut
				302	SunLite	Sunflower Table Cut

To prevent accidents, strictly follow these operating instructions and WARNINGS on the machine.

- Before starting the machine, CHECK for operational dependability and traffic safety!
- In addition to these operating instructions, also follow the current safety instructions.
- The warning signs and labels give important notes for the safe operation of the machine, thus serving the health and well-being of yourself as well as others.
- Prior to operating the machine make yourself familiar with all operating elements, safety procedures and functions. Ensure that all who will operate or come into close vicinity of the machine also have this knowledge.
- Check the driving characteristics, steering and braking behavior of any vehicle that will make use of or tow this machine.
- Load rating of the tires is to be checked and sufficient load capacity ensured.
- Sufficient hydraulic lifting power and stability of the lines are to be ensured.
- When working on the machine the provided supporting devices must be used.
- Admissible axle loads and total weight must consistently be observed.
- Before start-up all guards and maintenance holes must be in position and closed.
- While the machine is running be respectful of dangerous areas and adhere to warning labels at all times.
- Maintenance and repair work is to be performed only with engines shut down and drive lines disengaged.
- On public roads the legal provisions must be observed.
- If required, additional headlights for the road transport must be mounted (see local road transport licensing regulations).
- The instructions of the combine manufacturer must be observed as they pertain to operation of headers.
- The transport and operation of all machines including customized ones is made at your own risk.



CAUTION

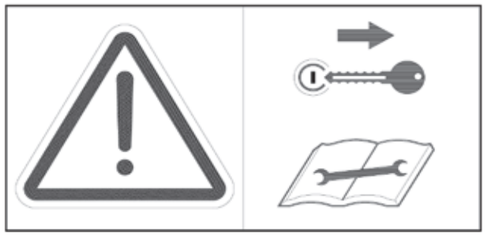
- The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.
- Protect yourself.

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

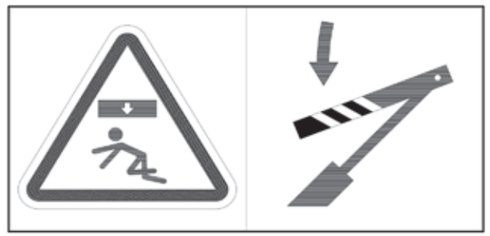
You may need:

- A hard hat.
- Protective shoes with slip resistant soles.
- Protective glasses or goggles.
- Heavy gloves.
- Wet weather gear.
- Respirator or filter mask.
- Hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs or ear plugs protects against objectionable or loud noises.
- Provide a first-aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine.
- Be sure the extinguisher is properly maintained and be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.
- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.
- Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.
- Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.
- Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.
- Keep machinery clean. Straw and chaff on a hot engine are a fire hazard. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.
- Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.

ISO 11684

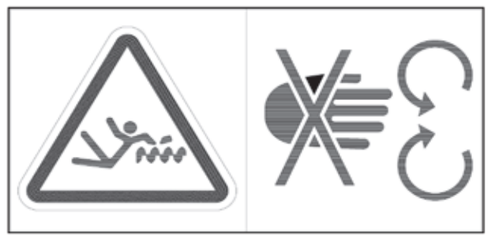


Prior to performing maintenance and repair work, turn off the motor and withdraw the key.

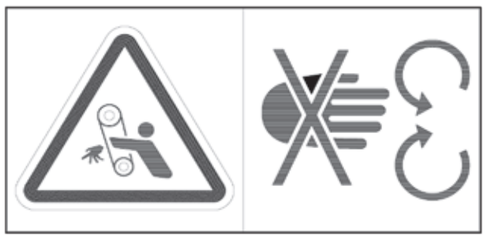


Insert lifting cylinder safety latches before entering dangerous areas.

Keep away from danger zones between the header and machine!

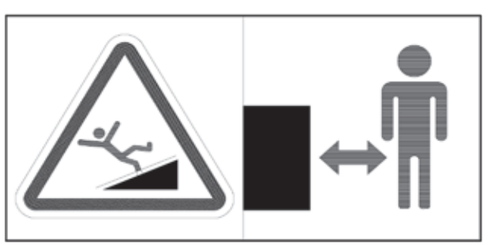


Keep clear of operating machinery.



While the motor is running, never allow guards to be removed.

While the machine is in operation, keep away from moving components.



Keep a sufficient safety distance to the header. Prior to maintenance works or clearing of clogged header, switch off motor and remove key. Keep clear of machine during operation to avoid flying debris.

Never go into the operational range of the machine.

Torque - Minimum Hardware Tightening Torques for Normal Assembly Applications

Metric Non-Flanged Hardware and Locknuts

NOMINAL SIZE	CLASS 5.8 UNPLANTED	CLASS 8.8 UNPLANTED	CLASS 10.9 UNPLANTED	LOCKNUT CL.8 W/CL8.8
M4	1.7 Nm (15 lb in)	2.6 Nm (23 lb in)	3.7 Nm (33 lb in)	2.3 Nm (20 lb in)
M6	5.8 Nm (51 lb in)	18.9 Nm (79 lb in)	13 Nm (115 lb in)	7.8 Nm (69 lb in)
M8	14 Nm (123 lb in)	22 Nm (194 lb in)	31 Nm (274 lb in)	19 Nm (168 lb in)
M10	28 Nm (20 lb ft)	43 Nm (31 lb ft)	61 Nm (44 lb ft)	38 Nm (28 lb ft)
M12	49 Nm (36 lb ft)	75 Nm (55 lb ft)	107 Nm (78 lb ft)	66 Nm (48 lb ft)
M16	121 Nm (89 lb ft)	186 Nm (137 lb ft)	266 Nm (196 lb ft)	344 Nm (253 lb ft)
M20	237 Nm (174 lb ft)	375 Nm (276 lb ft)	519 Nm (382 lb ft)	330 Nm (243 lb ft)
M24	411 Nm (303 lb ft)	648 Nm (477 lb ft)	897 Nm (661 lb ft)	572 Nm (421 lb ft)

Notes

Section 2 - Setup and PDI (Pre-Delivery Inspection)

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Install clearance lights 21
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Monitor instructions 28
Computer diagrams 42
PDI sheet 45

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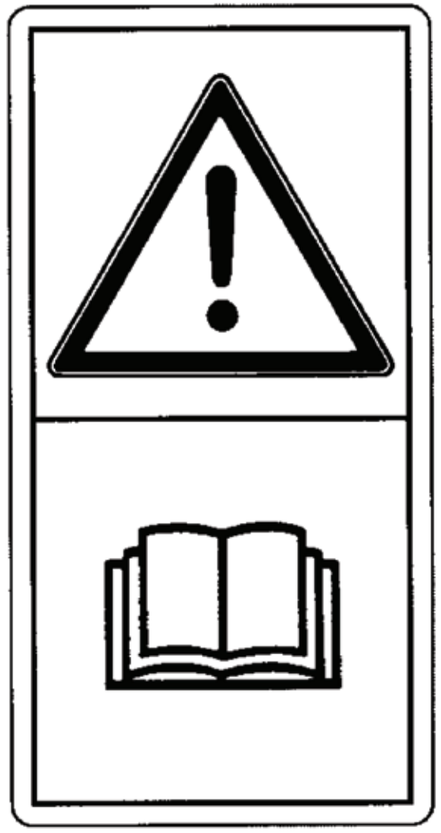

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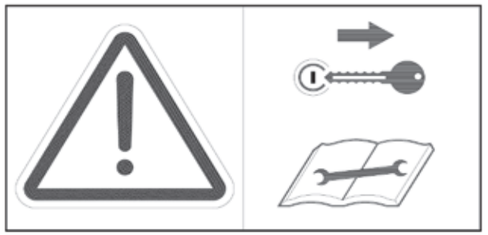

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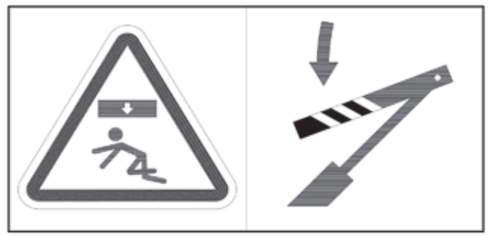

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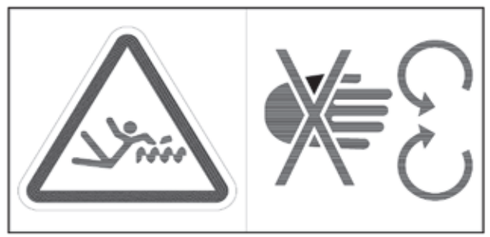

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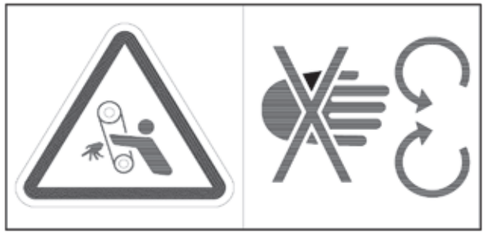

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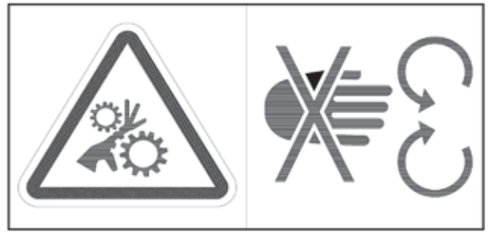
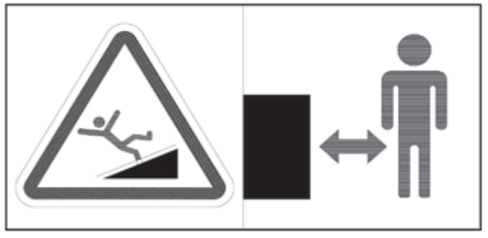


While the machine is in operation, keep away from moving components.



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Unloading

Unloading the Cornhead from a Flatbed

Using a forklift with large enough lifting capacity, spread the forks as wide as possible. Using the main shipping frame under the unit, lift, remove and set on flat stable ground.

Unloading from the Top of Head

Use the two welded eyelets on the lifting bar that is connected to row units. Attach a short chain from the forks to the frame. Ensure that the chain will not slide off the forks. Lift head and remove then set on stable flat ground.

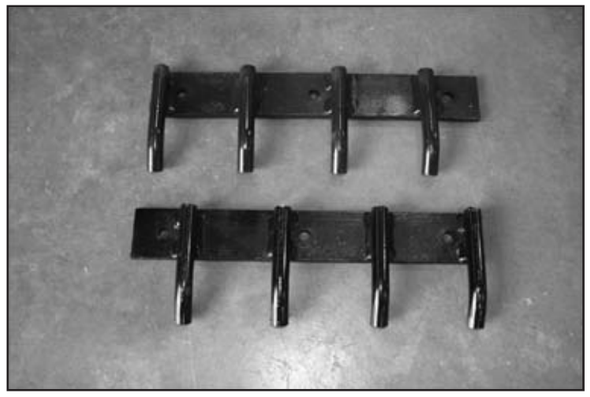
Note - If head is delivered during inclement weather, ensure that salt and road debris are washed off immediately.

When lifting or moving a Geringhoff corn head, only lift from opposite of poly side.

Review Packing List to Ensure all Components Have Arrived

- GP Box
- Drivelines
- Manuals
- End shields
- Monitor
- Points
- Lighting
- Headsight
- ½ moons on 12 row and larger heads
- Accessories

In your parts box, you will find a set of fingers that goes with the unit. They can be installed on the auger in certain crop conditions (such as down corn or fluff).



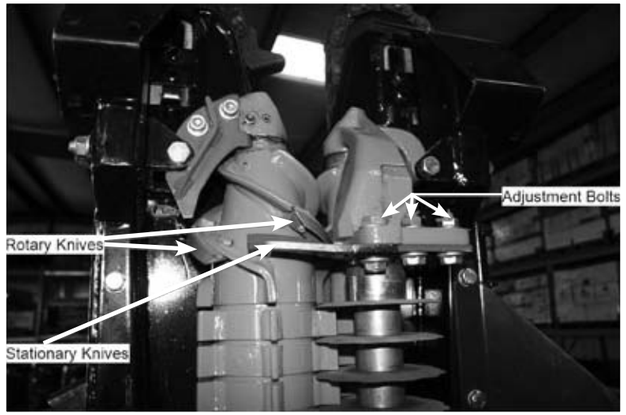
Assembly

With the head standing up, remove all parts from around the auger, cut straps, and remove row dividers.

This is a good time to check stationary knives on the Rota Disc and the stalk roll knives on the NorthStar for proper clearance and grease the rollers as indicated on page 14 for the Rota Disc and page 15 for the NorthStar. If this is not done now it will have to be done when the head is mounted to the combine.

Stationary and Rotating Knives

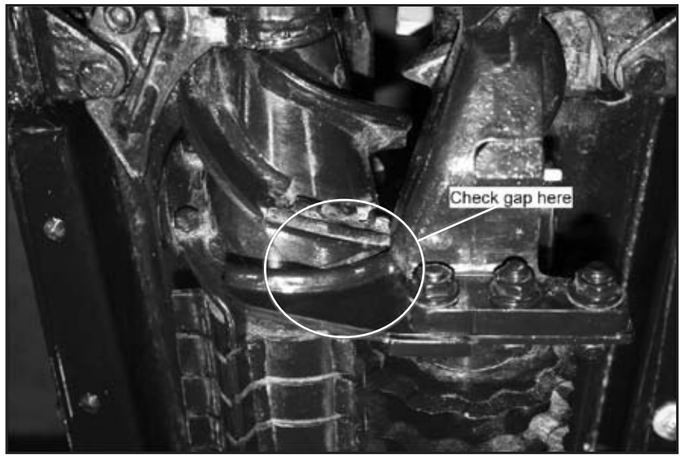
The stationary knives should be set to 1mm clearance from the rotating knives.



Adjusting Stationary Knives on RD

By using a crescent wrench, spin the large roller to check the clearance between the knives.

Check clearance on all three knives before adjusting stationary knife. If adjustment is needed, loosen adjustment nuts and tap stationary knife in direction needed. Tighten and spin to check clearance again.

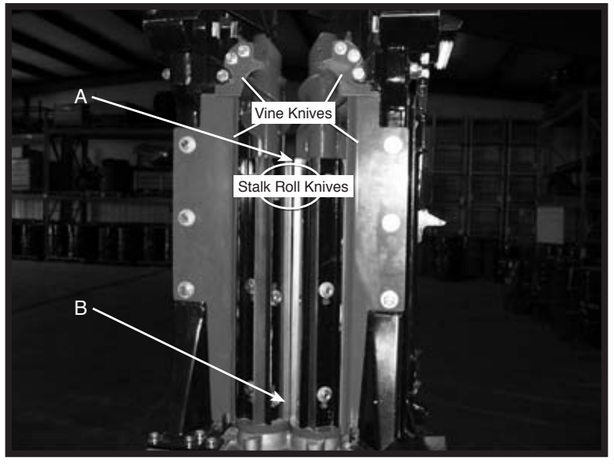


Adjusting Stationary Knives on NS

Adjustments of vine knives and stalk roll knives.

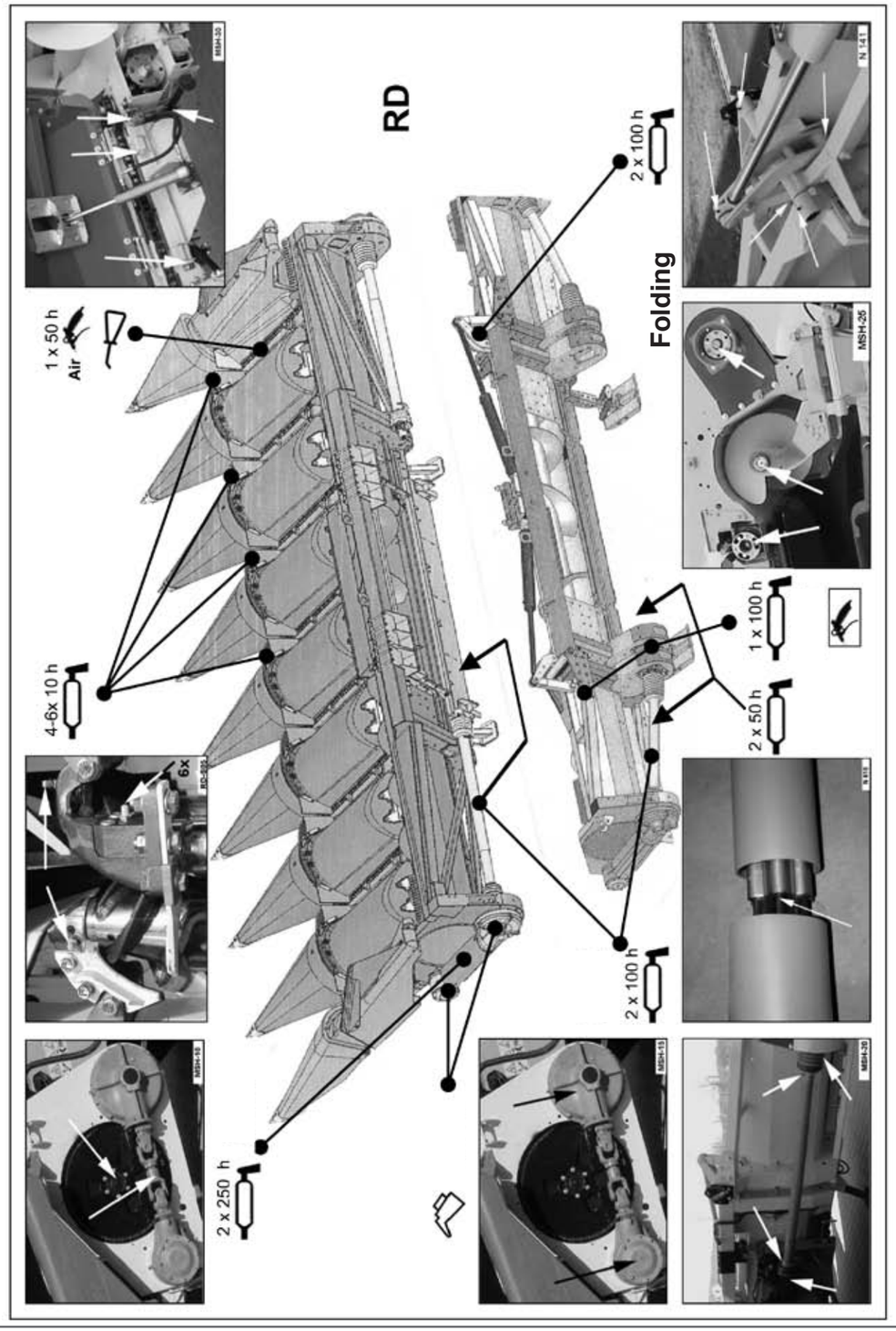
Adjust the stalk roll knives to 1-2mm at the top (A) and .5mm at the bottom (B). Rotate knife rolls to ensure proper measurements on all four knives

Adjust the vine knife to .5mm. Once you have it set at .5mm please make one complete rotation on knife roller to ensure there are no contact points between vine knife and knife roller.



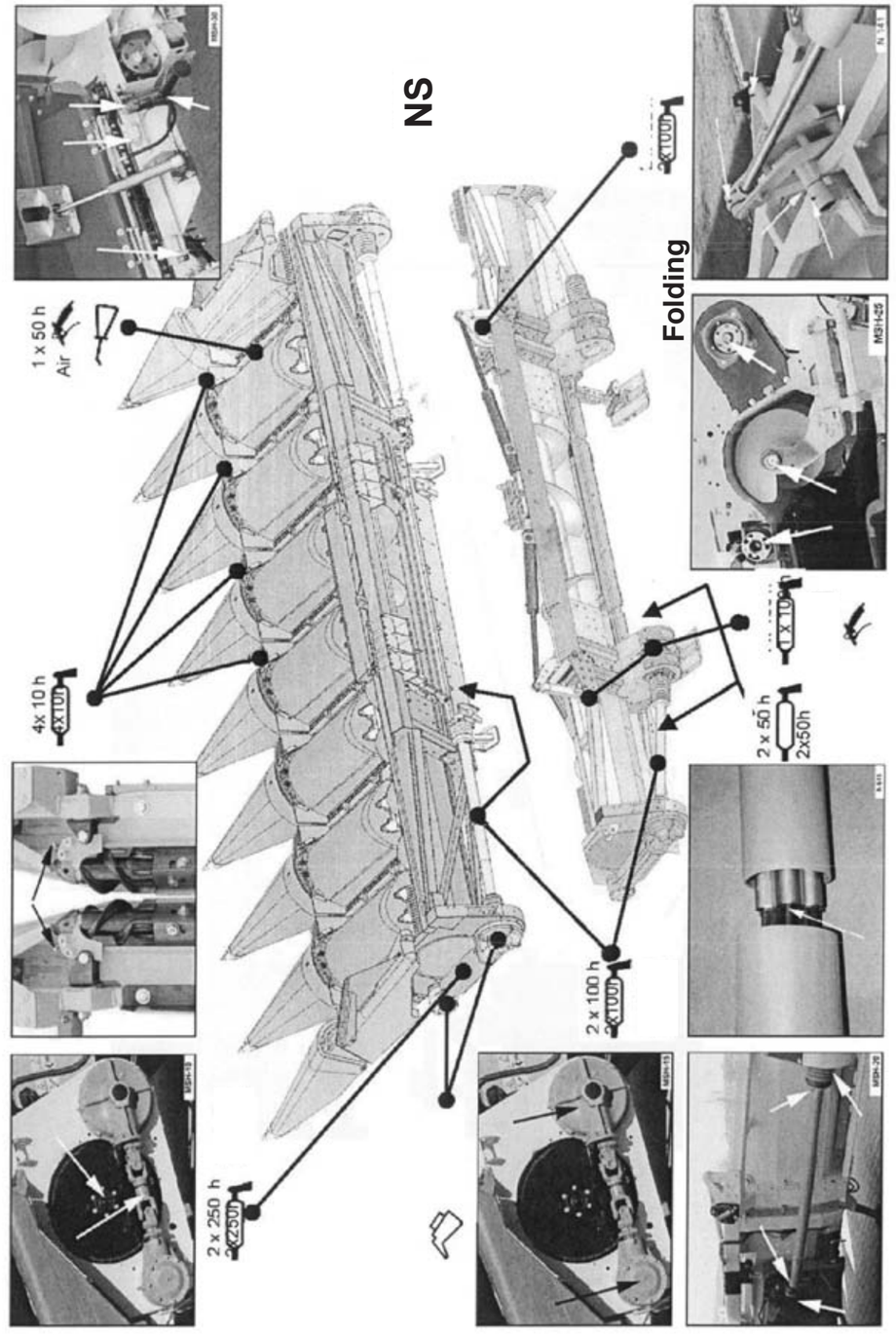
Grease the Unit

Grease points for the RD.



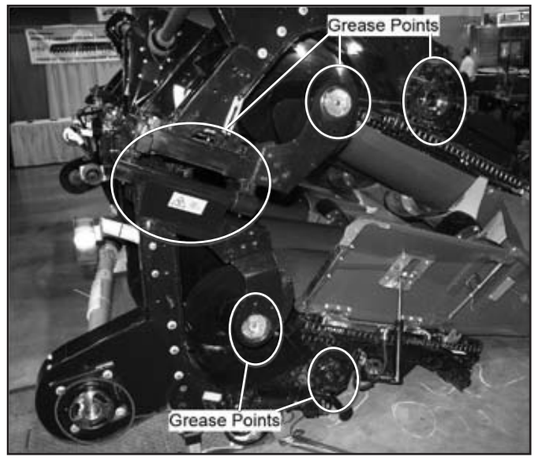
Grease the Unit

Grease points for the NS.



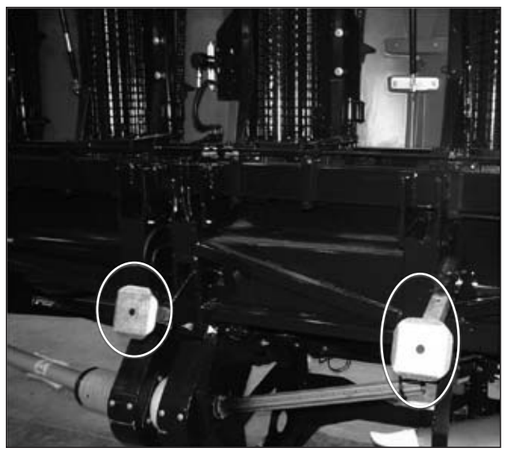
Grease both driveline shafts and the shafts between the crown gearbox and miter gearbox.

On folding heads grease the couplers for all the drives, as well as the hinges.



Laying the Header Down

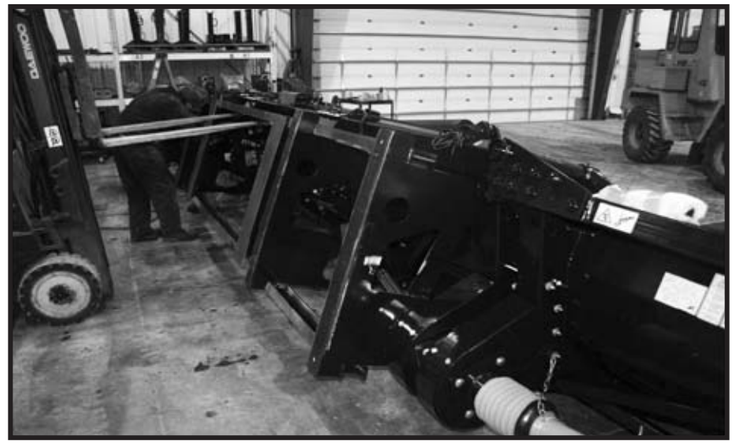
Insert the legs into the back of the corn head.



Secure two chains to the top lifting bar and to the forks of a forklift. Tighten the chains and back up slowly lowering the corn head to the ground. Two wooden blocks should be placed under the lifting bar to aid in the removal of your chain.

Remove Shipping Stand

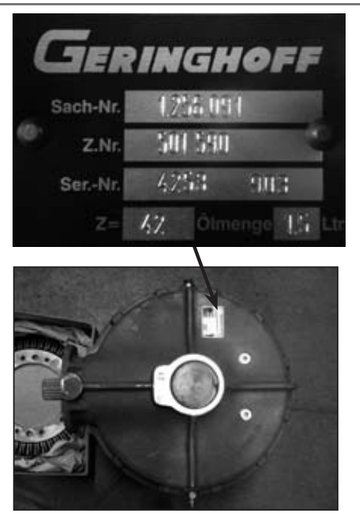
After head is laid down into field position, support the shipping stand with a forklift, then remove the bolts holding the stand (4 bolts on 6 and 8 row units, 8 bolts on 12 row and larger units). Remove stand and deliver stand and cornhead to farmer.



Check The Gear boxes

Check for correct gears as per combine specs (see Service Hints and Suggestions - page 72).

When filling or adding oil to any of the gear boxes on a Geringhoff Corn Head use only 80w90 gear oil. **Use of a synthetic oil will void gearbox warranty.** Check the torque of all drain plugs and fill plugs on the gearboxes. All fill plugs should be torqued to 35 ft lbs. All drain plugs should be torqued to 25 ft lbs.



Crown Gear Box

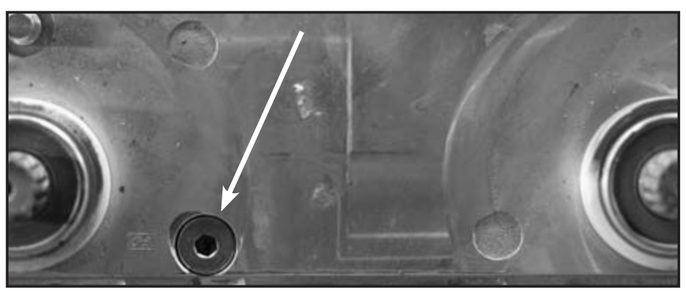
With header in working position remove bottom check plug. Fill with gear lube (80w90) until visible at the bottom of the fill hole. Then reinstall plug and ensure it is tightened to proper specs.

Miter Gear Box

With header in working position remove plug in the center of gearbox. Fill with gear lube (80w90) until visible at the bottom of the fill hole, then replace plug and ensure it is tightened to proper specs.

Row Unit Gear Box

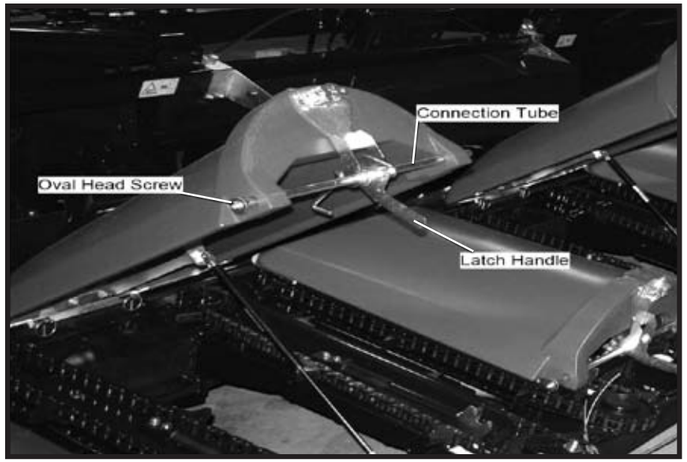
On the row unit gearbox, there is a dip stick attached to fill plug on the top of the gear box. This should be removed and checked, with header in the working position, to ensure that the level is between the scribe marks on the dipstick.



Install the Headsight on Row Dividers

If you have a Headsight to install, now is the best time to install this. Run and mount the wire harness as per the Headsight manual. Leave enough wire to reach the end of the row dividers when they are installed. Installation of sensors on end row or on the second row is personal / customer preference. Both positions work well. Install sensors to the row dividers as per Headsight manual.

Unlatch bonnet and let it rise. Remove one of the oval head screws using an 8mm allen wrench. When removing the connection tube note the position of the latch handle, so that when reinstalling it will be in the correct position. **Use Lock Tight on bolts when connecting.**



Lift point over bonnet and hook up the adjustment rod. This will help hold and line up the row divider.

Reinstall the connection tube and the latch handle. Use Blue Lock Tight on the threads of the oval head screw before reinstalling.

Install the rest of the row dividers. One easy way of installation is to lift every other bonnet.

Auger Chain

Remove inspection cover and check the alignment and tension of the auger chain. The chain drive sprocket, auger sprocket and idler sprocket should be aligned with the chain. The chain should be exhibiting limited slack.

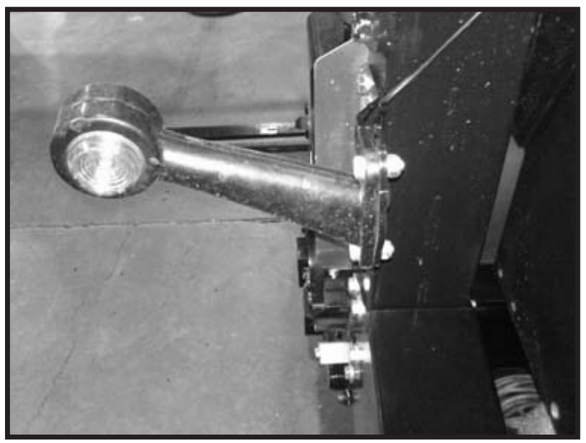
Install Deflector Shields on end row dividers.

If you have purchased the optional end row augers, these will already be installed.

Install Clearance Lights

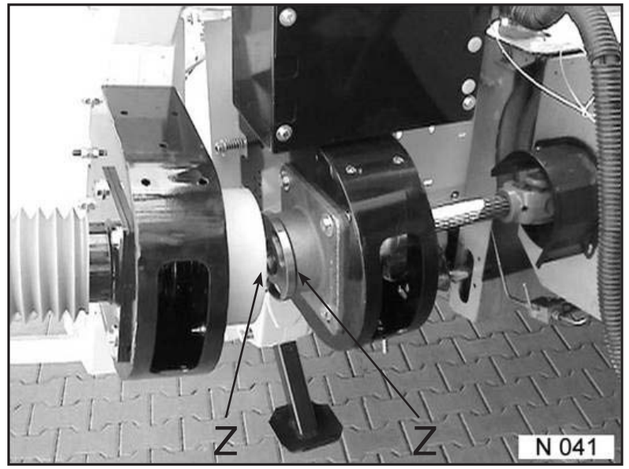
On a rigid corn head, mount the light assembly on the top ends of the head next to the hinge on the end bonnets.

On a folding corn head, fold wings and install light assembly at the fold.

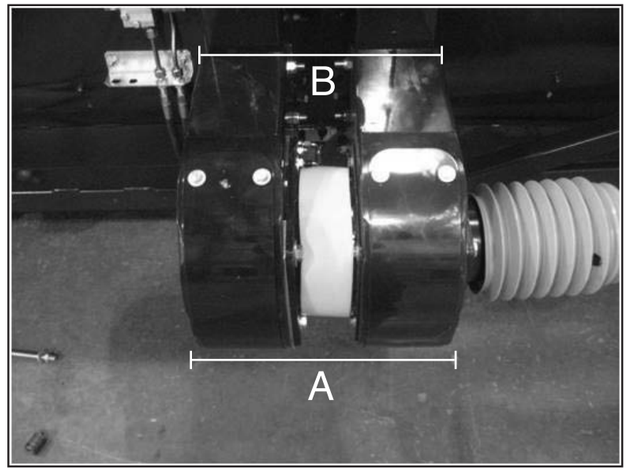


If you have a folding header now is the time to check this.

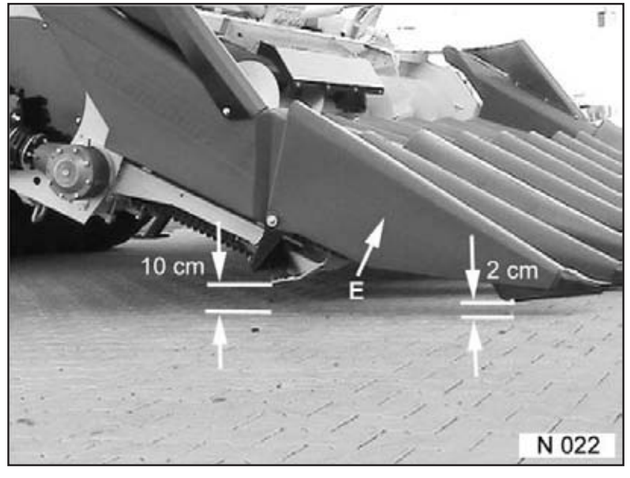
- For 2011 units, when folded, check lock pins in the center of the head to ensure each wing retaining pin is fully seated and centered in wing rest.
- For models of all years, check the drive coupler (Z). There should be a minimum of a 2mm depression of the spring for the drive.



Measure drive line mounts (A) to make sure they are parallel to (B) within a tolerance of 2mm.



Lower the head so that the skid plate is 10cm (4 inches) from the ground. Adjust the row dividers to 2cm (3/4 inch) from the ground.



Hook Up the Combine

Install the monitor in the cab. Then route the cable to the top right side of the feederhouse, with enough extra to plug into the head.

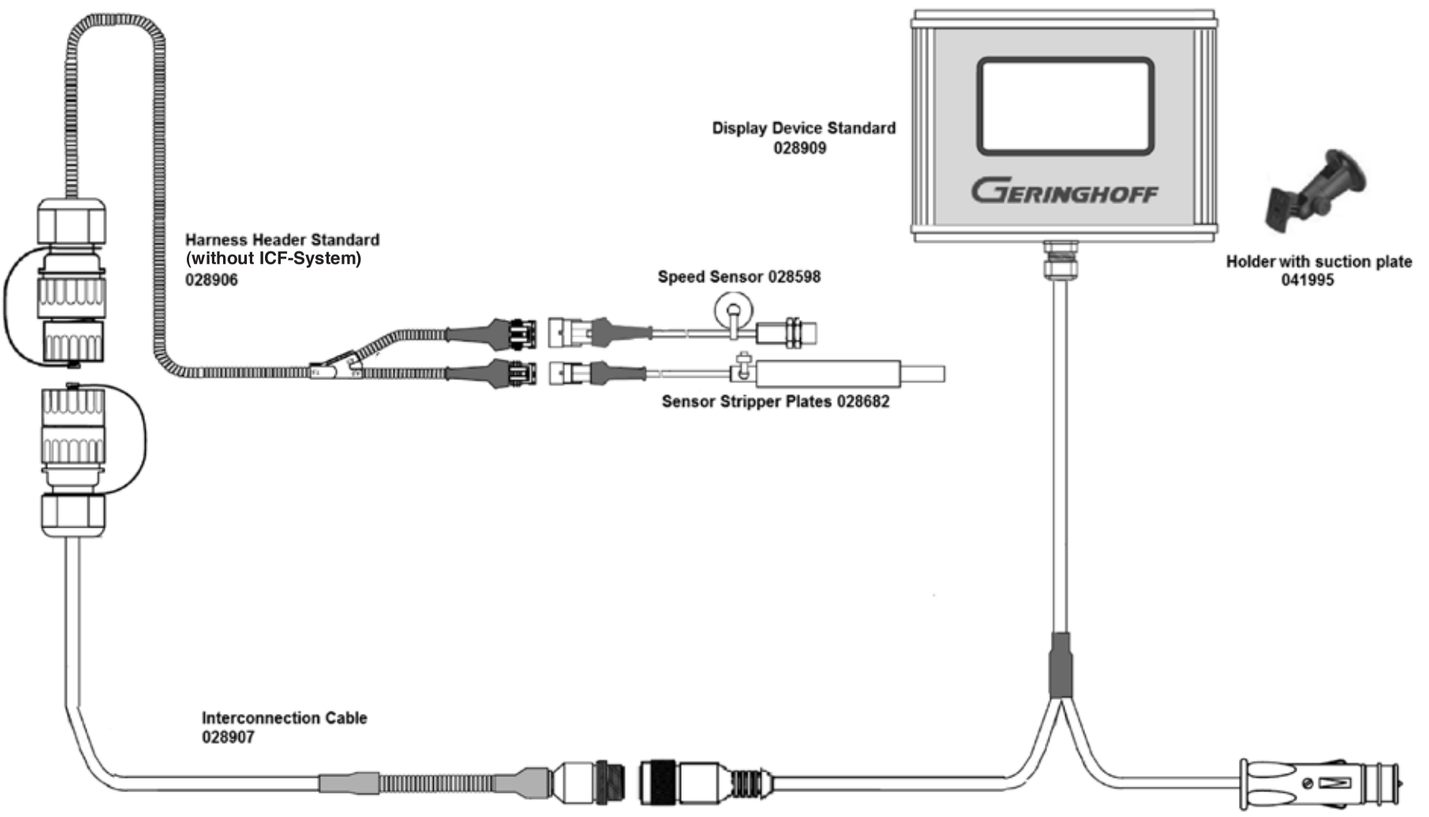
When hooking to the combine the first time, check the alignment of the top mounts, the shields around the feederhouse, and ensure that the locks latch properly.

Hook up drivelines and hydraulic lines to the combine. Then lift the head to full height and install the safety lock on the lifting cylinders. Remove the top lifting bar from the end of the row units.

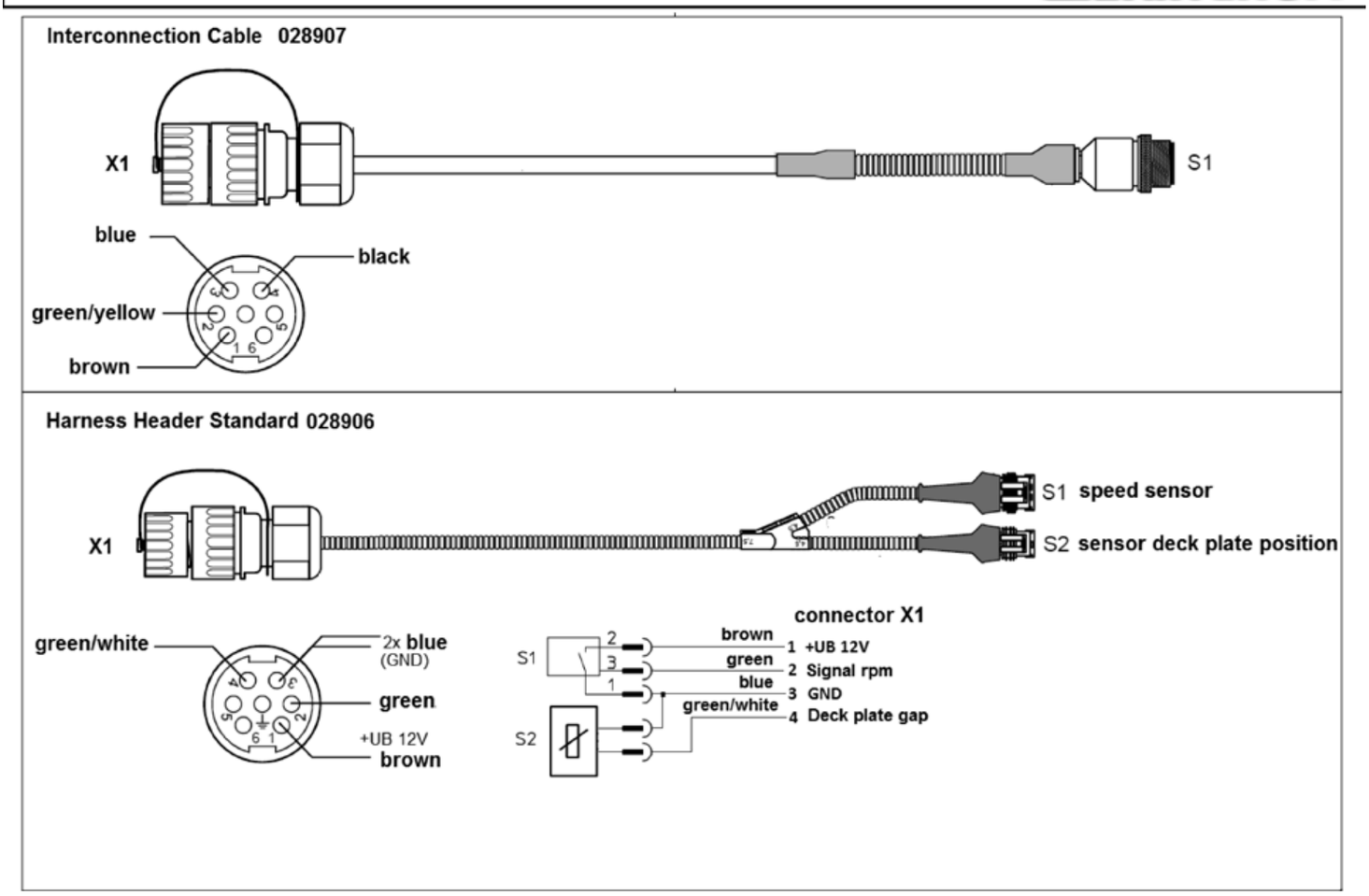
Engage the Head and Run to the Proper Speed.

- The Rota Disc should read 740 to 750 RPMs on the monitor
- The NorthStar should read 780 to 800 RPMs on the monitor.

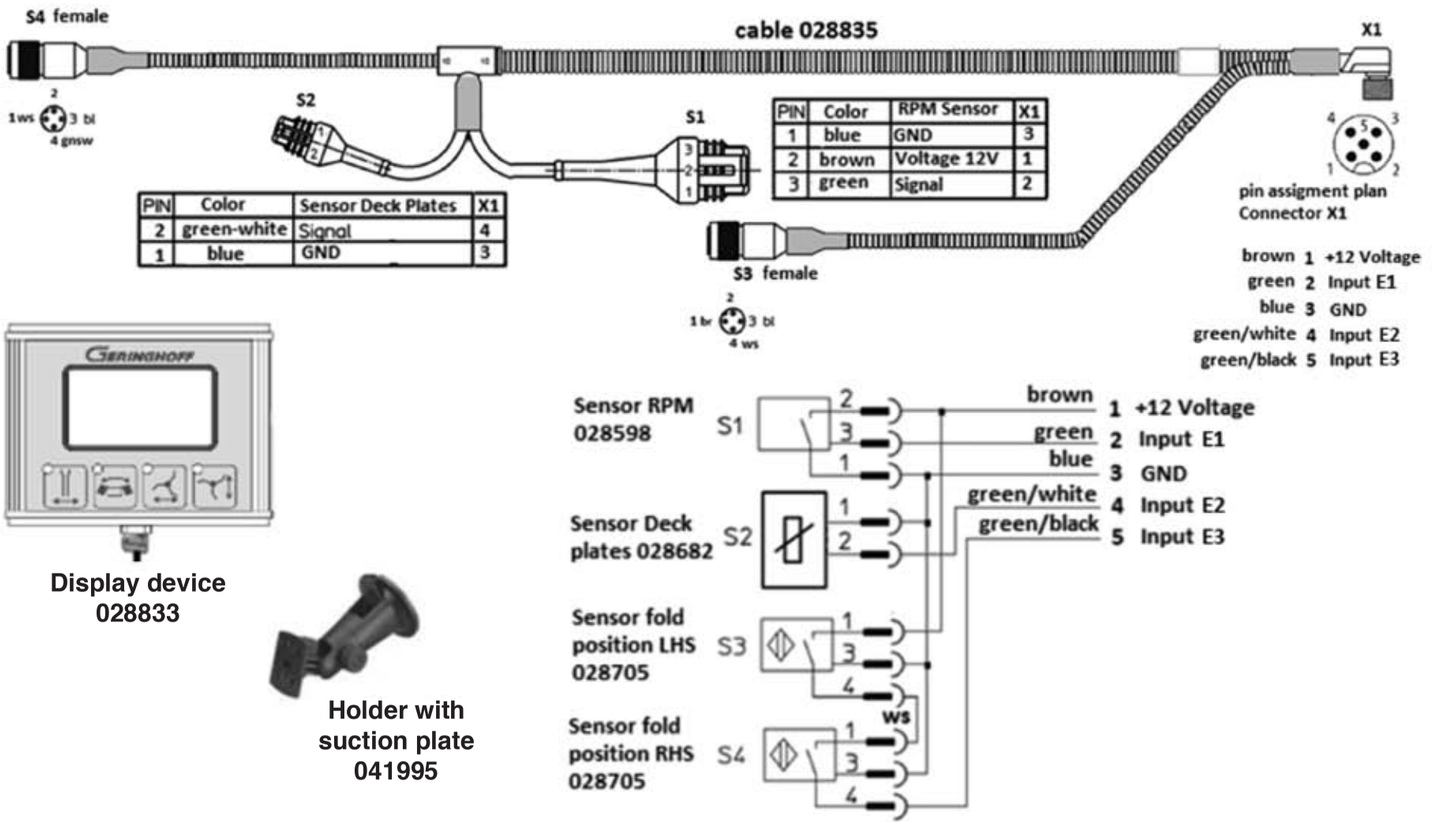
1. Electric parts for rigid Corn header 2012 – Standard equipped without ICF-System
1.1. page1 - Components



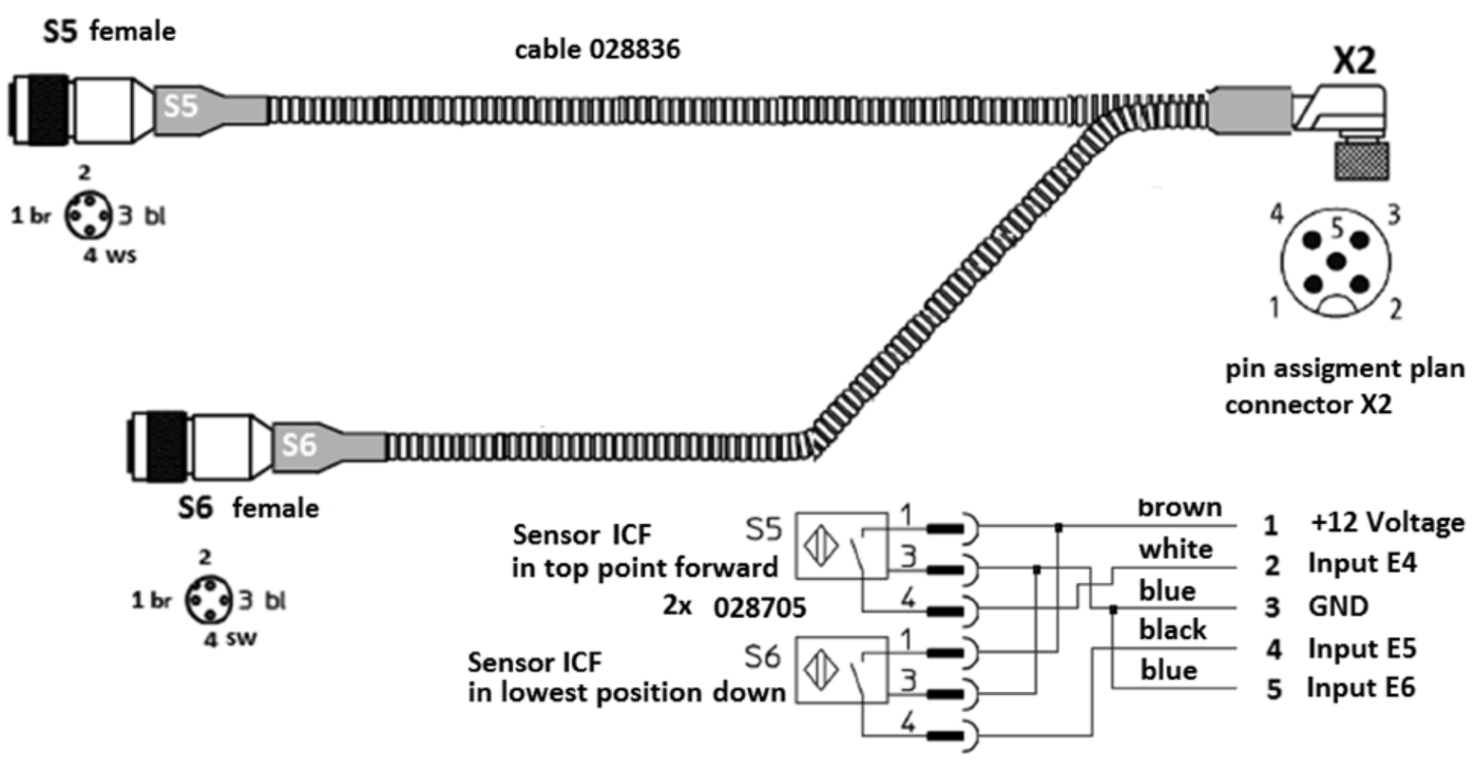
1. Electric parts for rigid Corn header 2012 – Standard equipped without ICF-System
1.2. page1 - Components



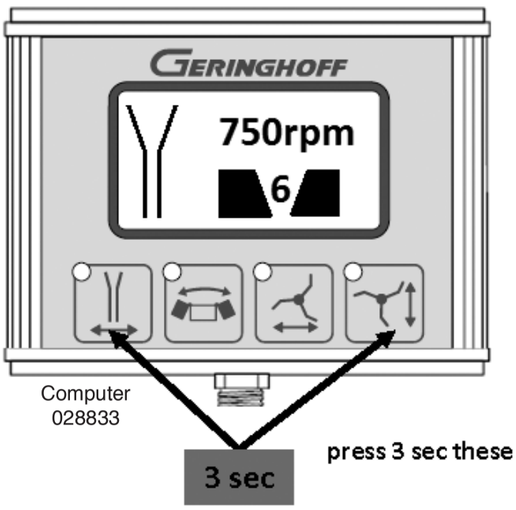
1. Electric parts for Corn header – 2012
Folding header



1. Electric parts for Corn header – 2012
Folding header with ICF System



Operator terminal – Service mode



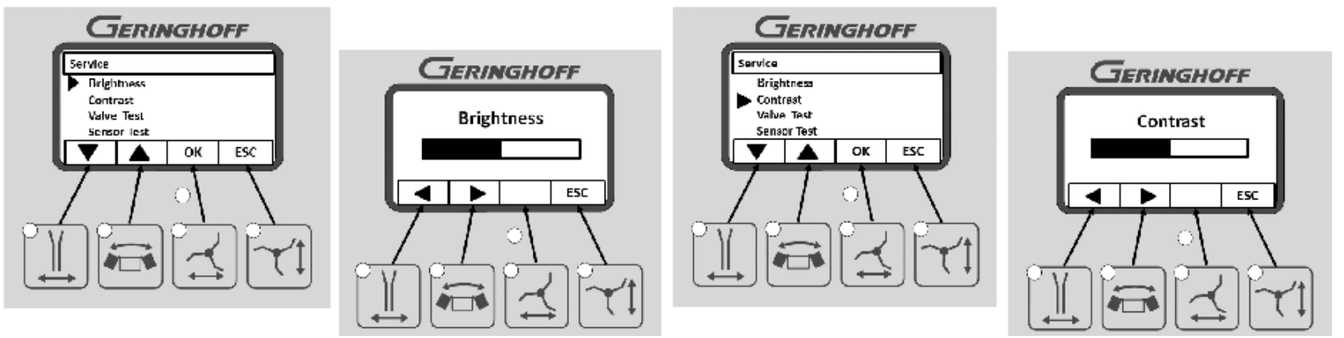
Button A – Deck plate adjustment - valve Y1

Button B – Folding function - valve Y2and/or Y3

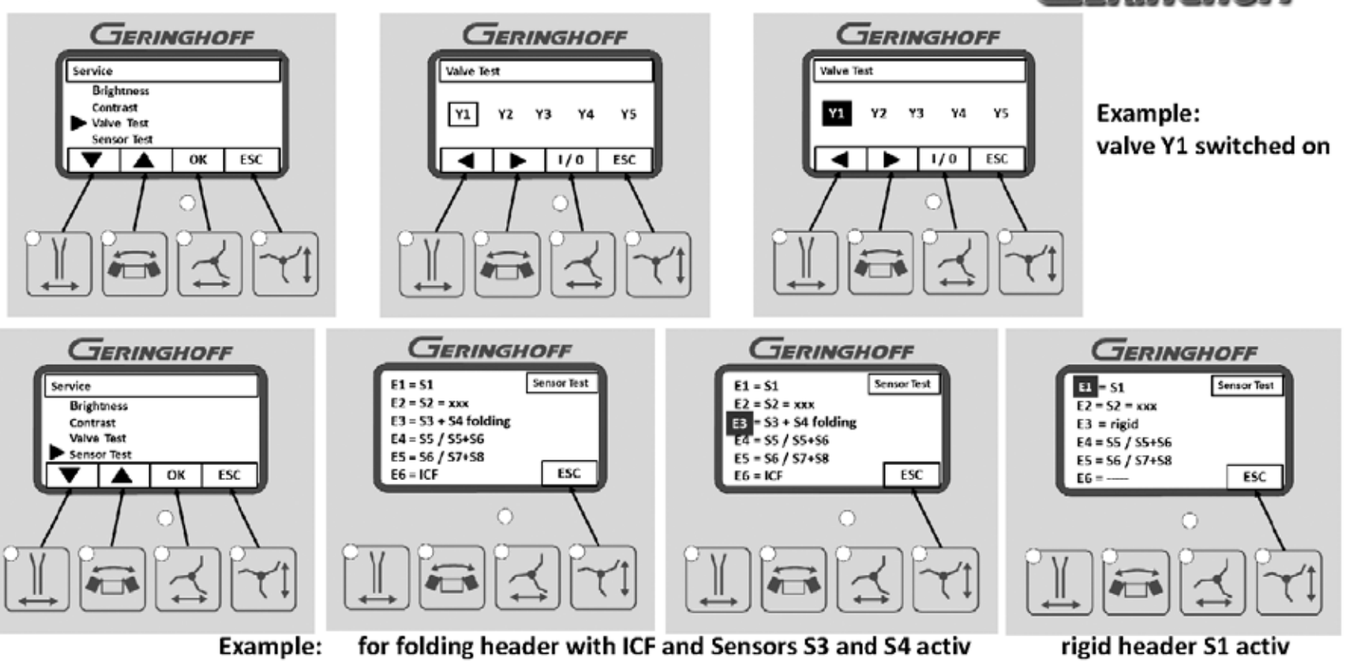
Button C – ICF forward/backward - valve Y4

Button D – ICF up/down - valve Y5

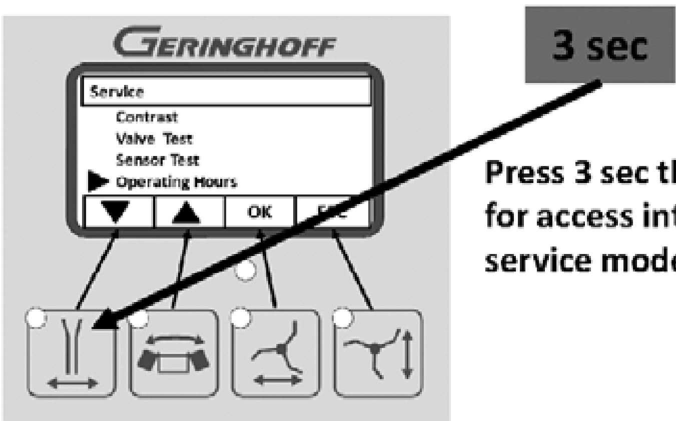
press 3 sec these buttons together for access into the service standard mode



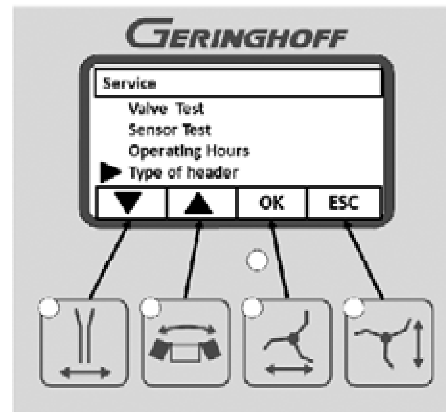
Operator terminal – Service mode *standard*



Operator terminal – Service mode *special*

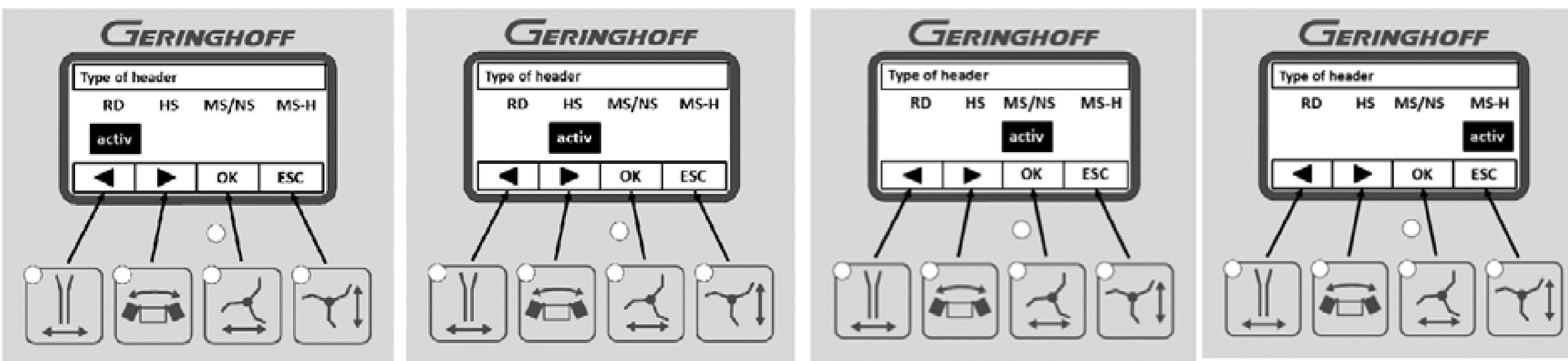


Press 3 sec this button for access into the service mode *special*

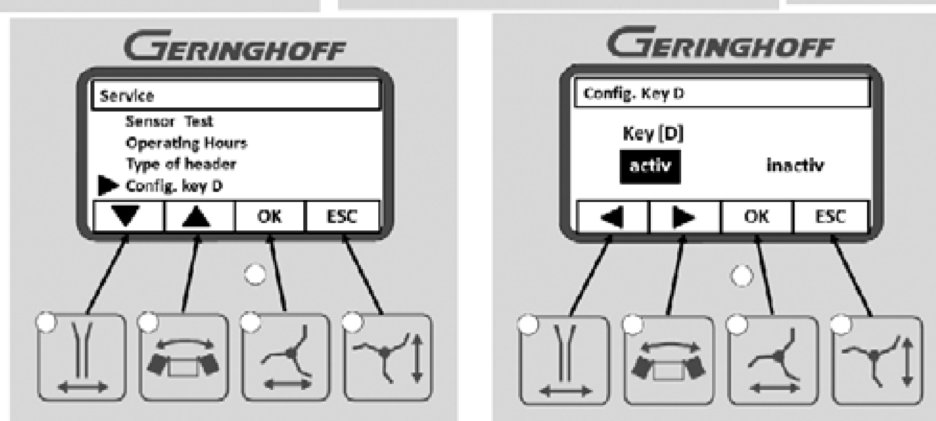


Selecting of the header type
(required for rpm warning sign)

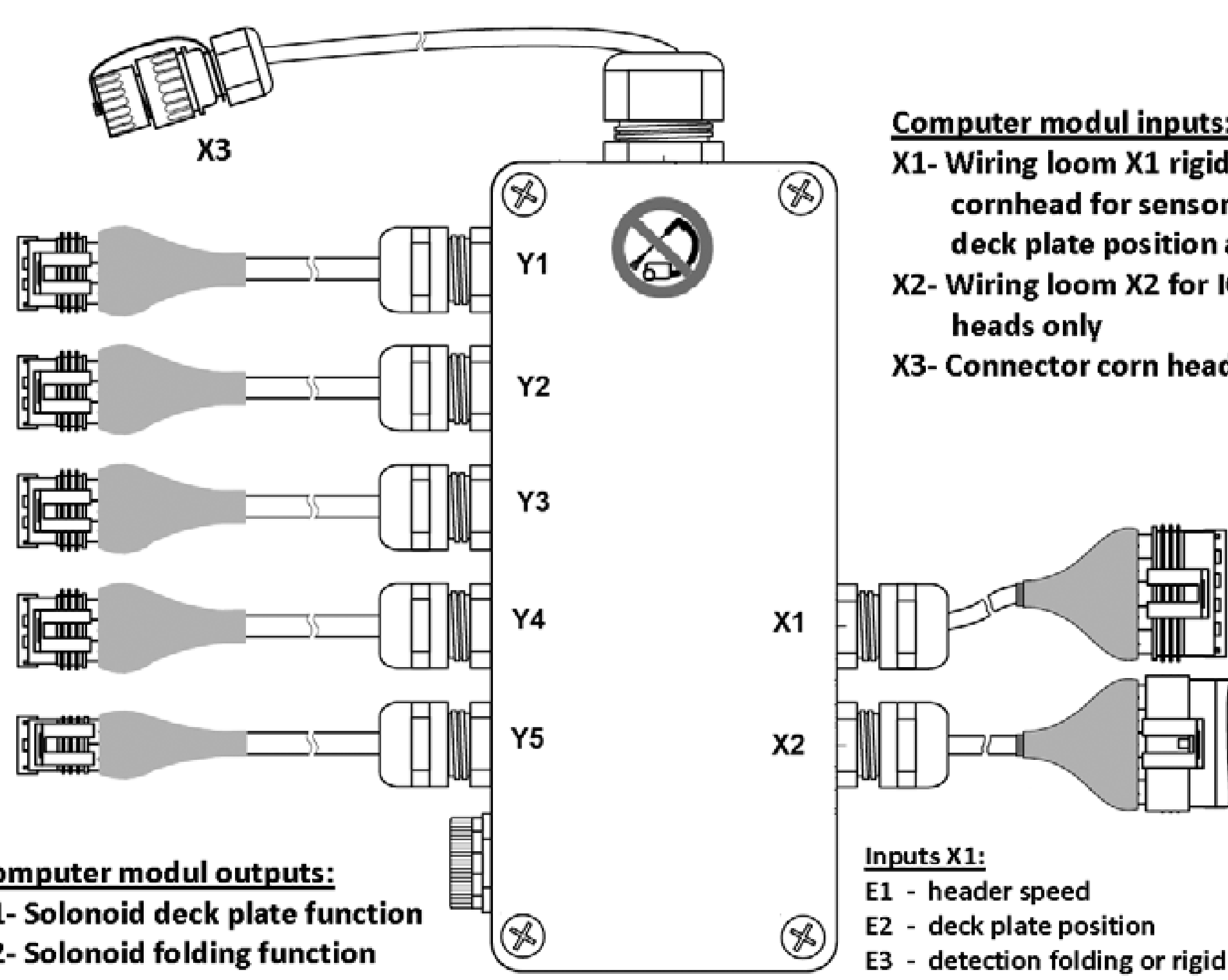
RD	<650rpm and >800rpm
HSII	<700rpm and >800rpm
MS/NS	<650rpm and >850rpm
MS-H	<700rpm and >850rpm



Selecting of the status button D



Computer modul – Cornheader 2012 (028830)



Computer modul inputs:
X1- Wiring loom X1 rigid or folding cornhead for sensorfunction RPM, deck plate position and folding position
X2- Wiring loom X2 for ICF system on folding heads only
X3- Connector corn header – combine harvester

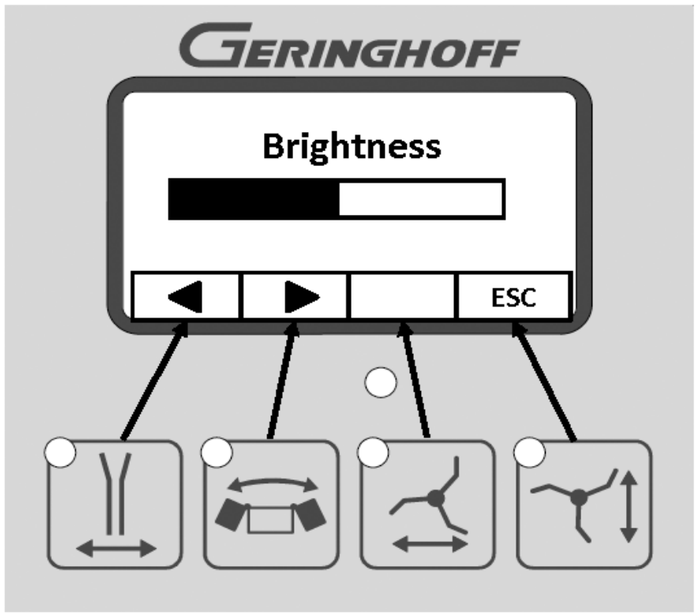
Computer modul outputs:
Y1- Solonoid deck plate function
Y2- Solonoid folding function
Y3- Solonoid locking system
Y4- Solonoid ICF forward/backward
Y5- Solonoid ICF up/down

23.11.2011

Inputs X1:
E1 - header speed
E2 - deck plate position
E3 - detection folding or rigid corn header and unfold position

Inputs X2:
E4 - position sensor ICF in top point
E5 - position sensor ICF in bottom point
E6 - detection kind of corn header with ICF system or VC


GERINGHOFF
Service
Brightness
Contrast
Valve Test
Sensor Test
OK
ESC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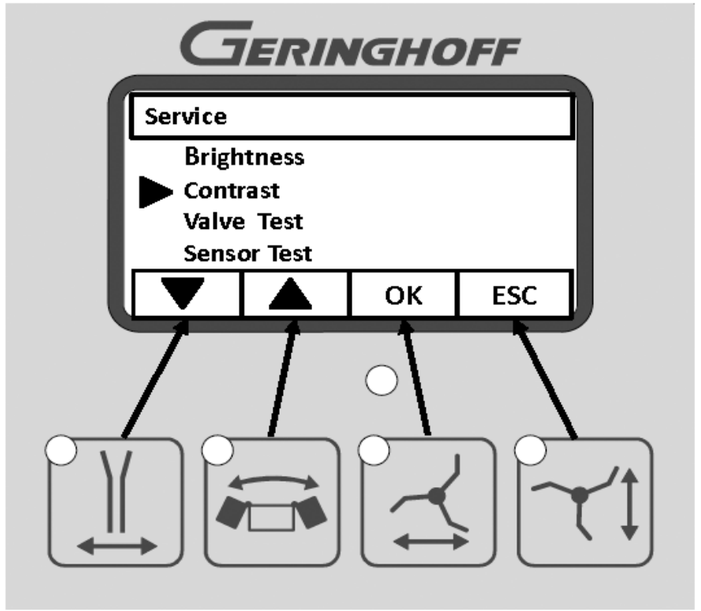
Brightness
ESC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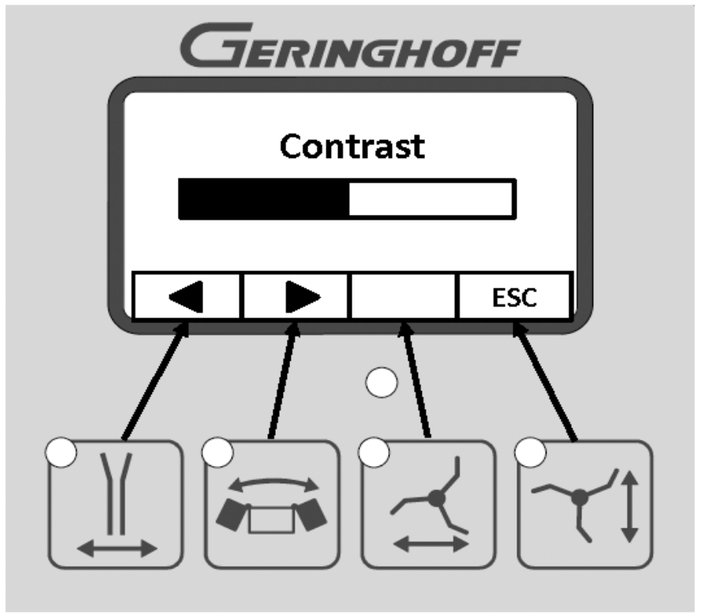
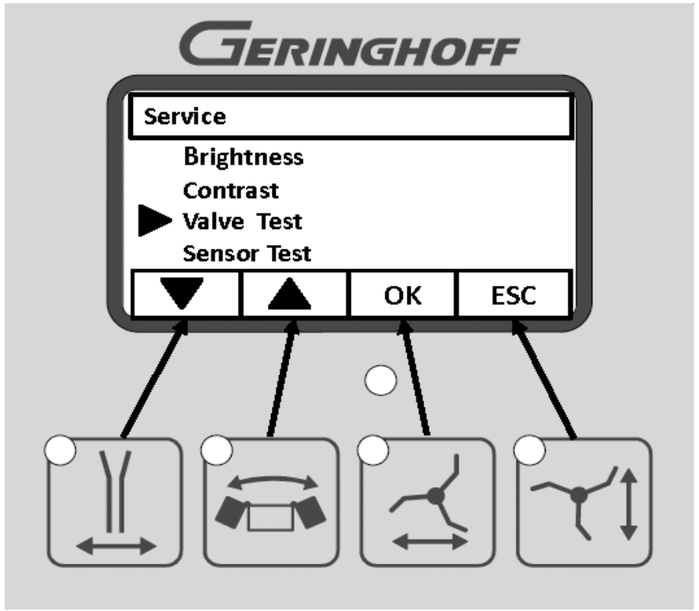
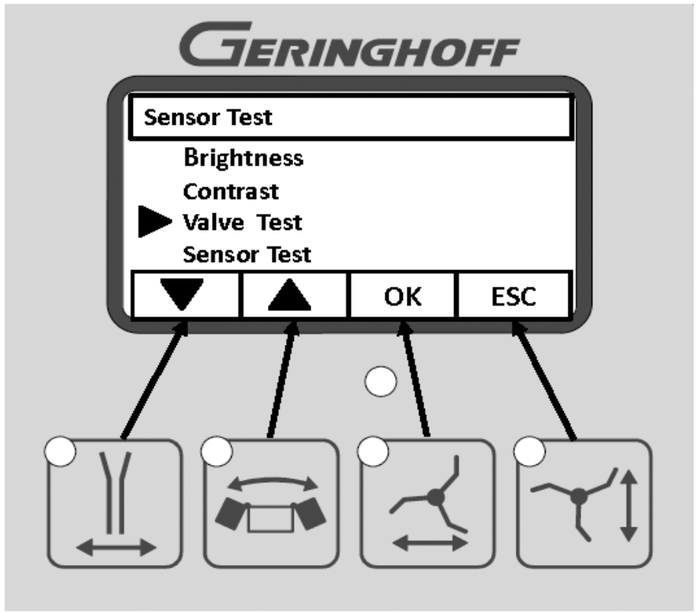
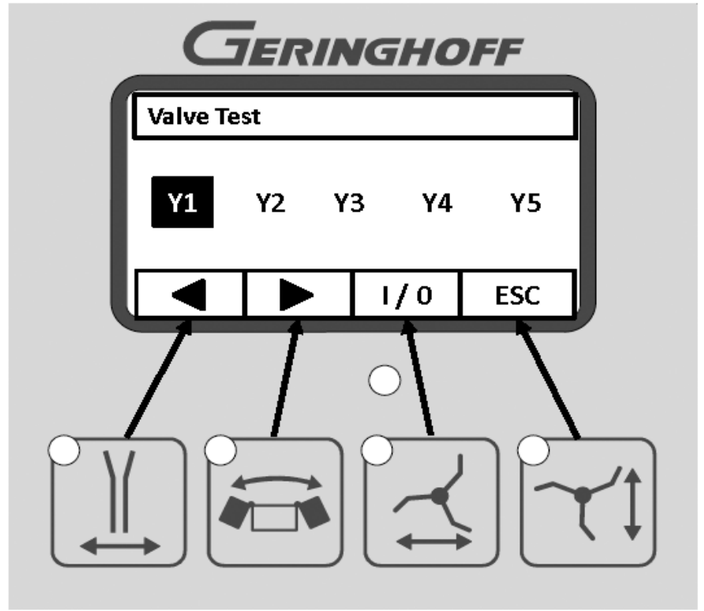
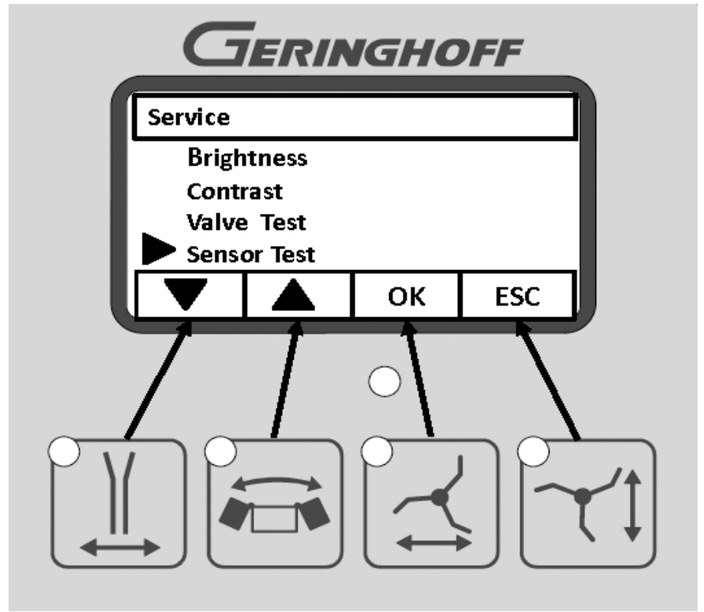
Service
Brightness
Contrast
Valve Test
Sensor Test
OK
ESC


GERINGHOFF
Contrast
ESC


GERINGHOFF
Service
Brightness
Contrast
Valve Test
Sensor Test
OK
ESC


GERINGHOFF
Sensor Test
Brightness
Contrast
Valve Test
Sensor Test
OK
ESC


GERINGHOFF
Valve Test
Y1
Y2
Y3
Y4
Y5
I / 0
ESC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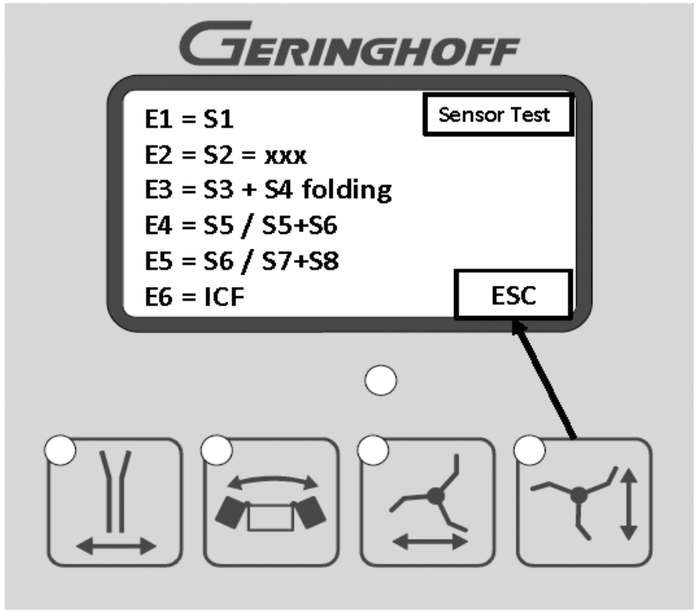
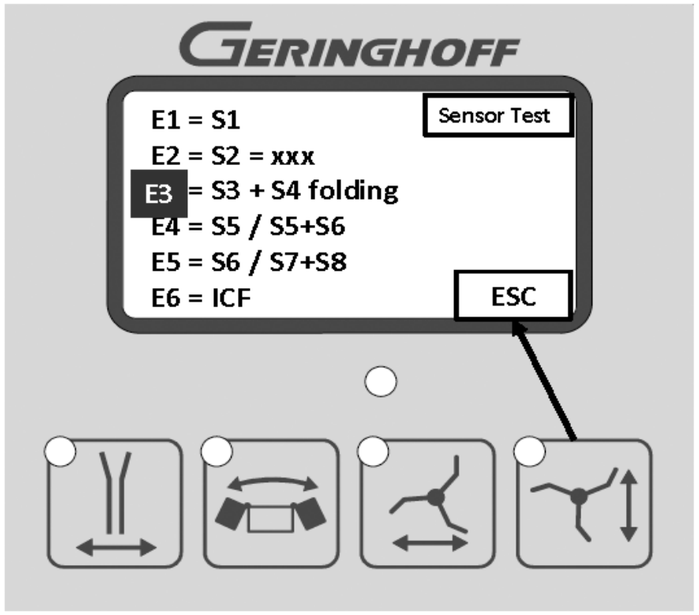
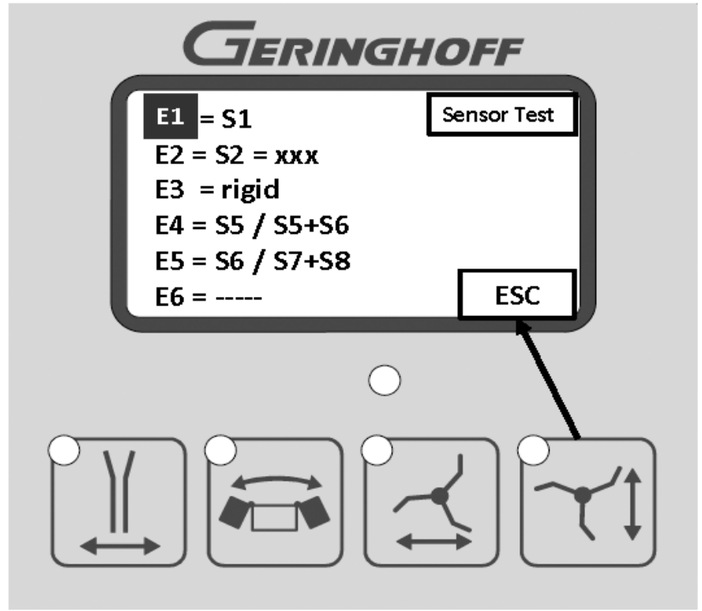
Service
Brightness
Contrast
Valve Test
Sensor Test
OK
ESC


GERINGHOFF
E1 = S1
E2 = S2 = xxx
E3 = S3 + S4 folding
E4 = S5 / S5+S6
E5 = S6 / S7+S8
E6 = ICF
Sensor Test
ESC


GERINGHOFF
E1 = S1
E2 = S2 = xxx
E3 = S3 + S4 folding
E4 = S5 / S5+S6
E5 = S6 / S7+S8
E6 = ICF
Sensor Test
ESC


GERINGHOFF
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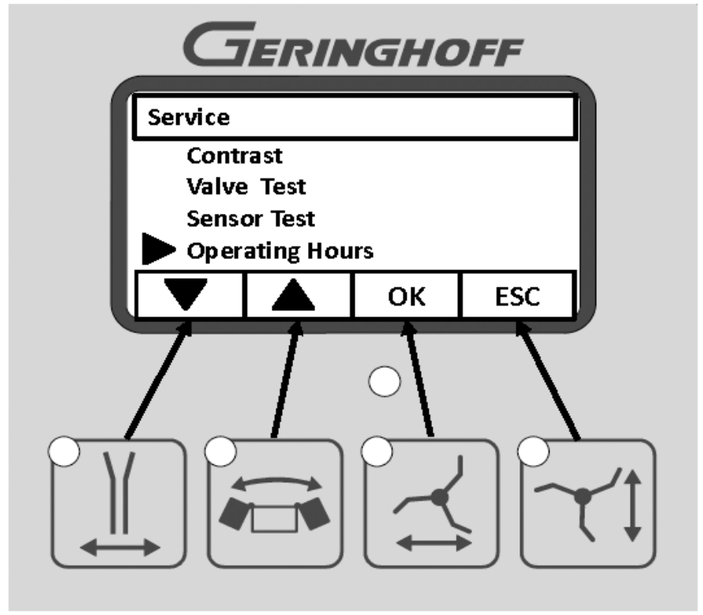
E2 = S2 = xxx
E3 = rigid
E4 = S5 / S5+S6
E5 = S6 / S7+S8
E6 = -----
Sensor Test
ESC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Service
Contrast
Valve Test
Sensor Test
Operating Hours
OK
ESC


GERINGHOFF
Operating hours
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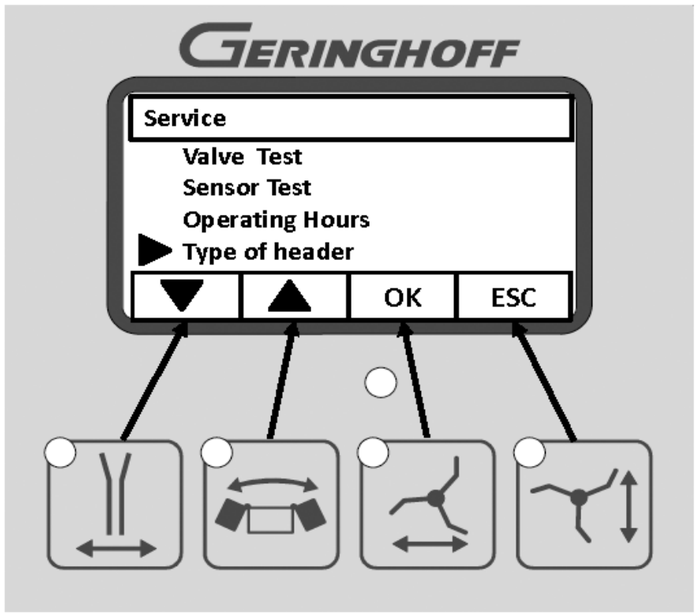
ESC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Service
Valve Test
Sensor Test
Operating Hours
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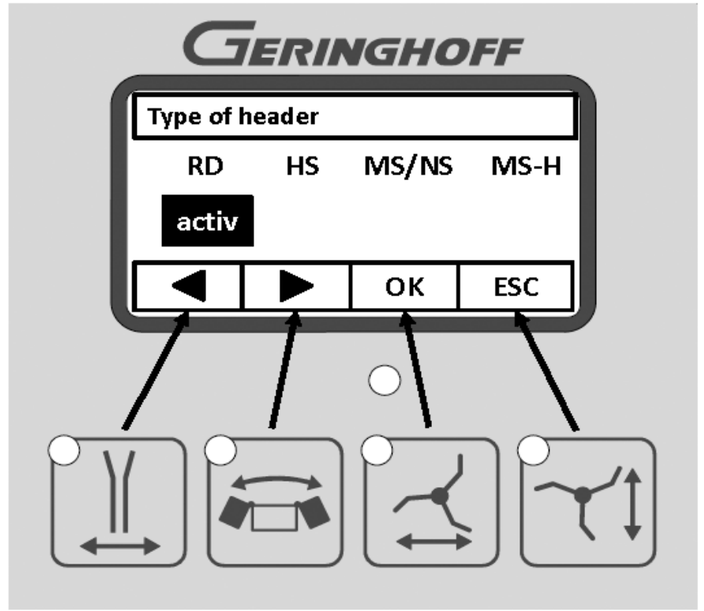
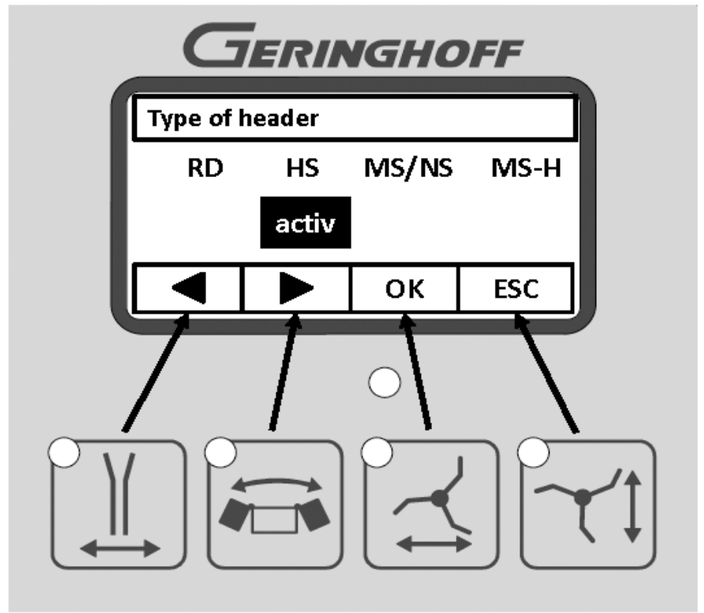

GERINGHOFF
Type of header
RD
HS
MS/NS
MS-H
activ
OK
ESC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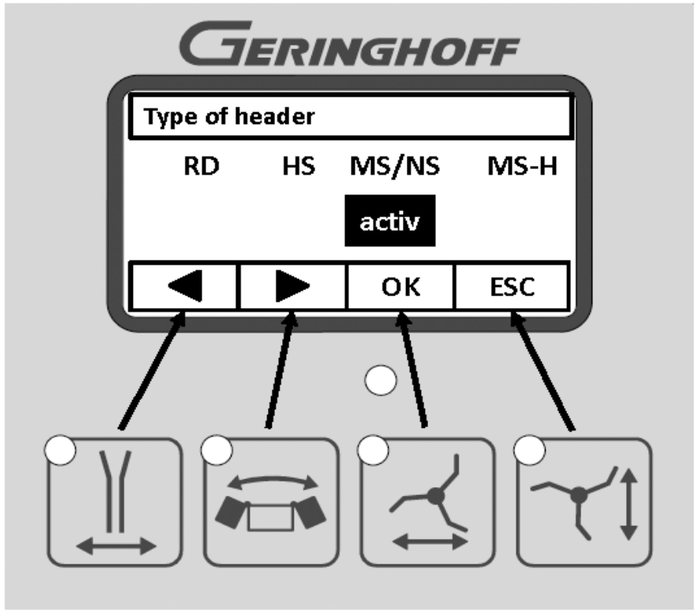
Type of header
RD
HS
MS/NS
MS-H
activ
OK
ESC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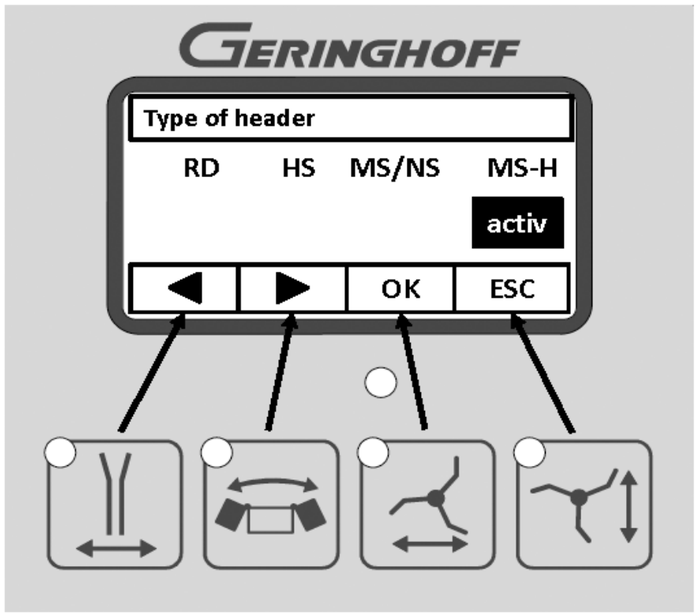
Type of header
RD
HS
MS/NS
MS-H
activ
OK
ESC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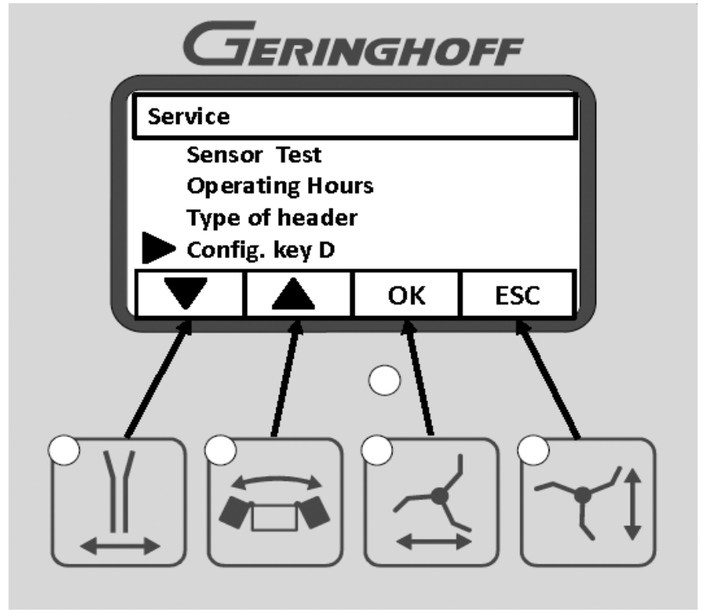
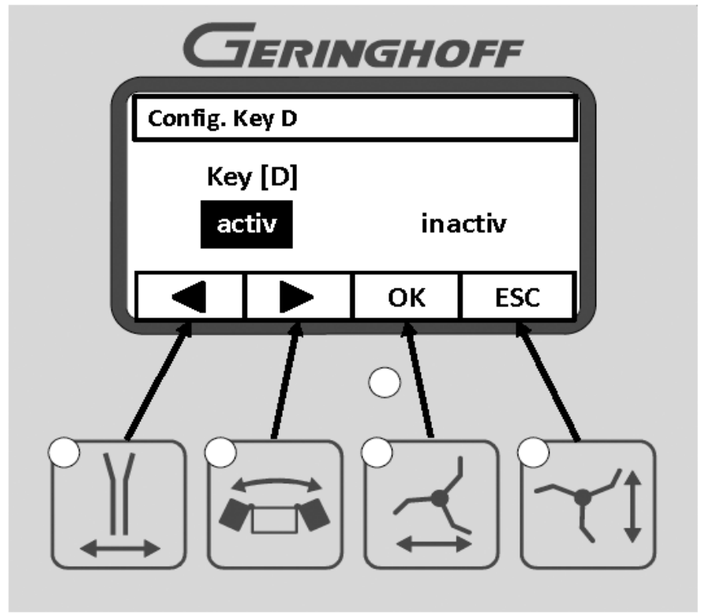
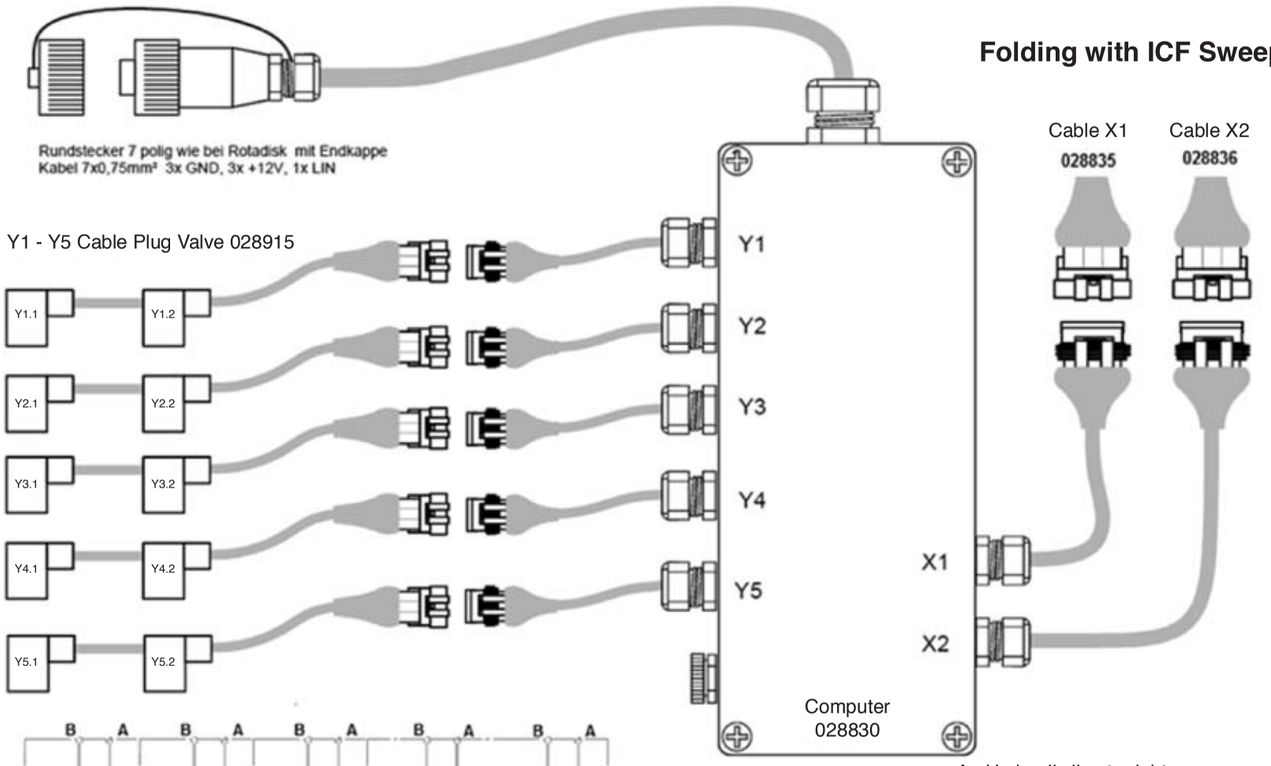
Type of header
RD
HS
MS/NS
MS-H
activ
OK
ESC


GERINGHOFF
Service
Sensor Test
Operating Hours
Type of header
Config. key D
OK
ESC


GERINGHOFF
Config. Key D
Key [D]
activ
inactiv
OK
ESC

Folding with ICF Sweeper



Y1 - Deck Plate Adjustment
A - Hydraulic line to right
B - Hydraulic line to left

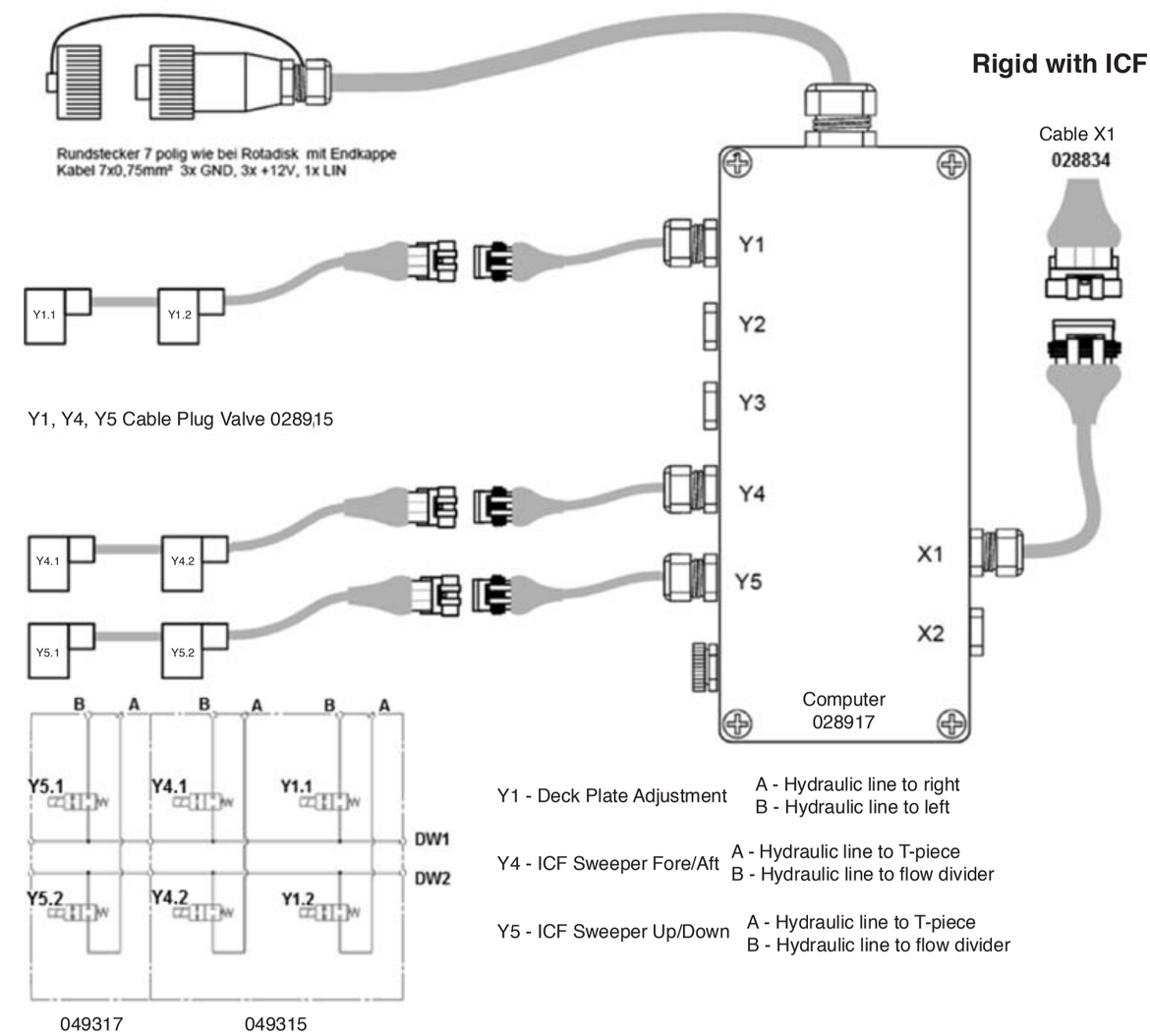
Y2 - Fold
A - Hydraulic line to T-piece
B - Hydraulic line to flow divider

Y3 - Lock
A - Hydraulic line to T-piece
B - Hydraulic line to flow divider

Y4 - ICF Sweeper Fore/Aft
A - Hydraulic line to T-piece
B - Hydraulic line to flow divider

Y5 - ICF Sweeper Up/Down
A - Hydraulic line to T-piece
B - Hydraulic line to flow divider

Rigid with ICF Sweeper

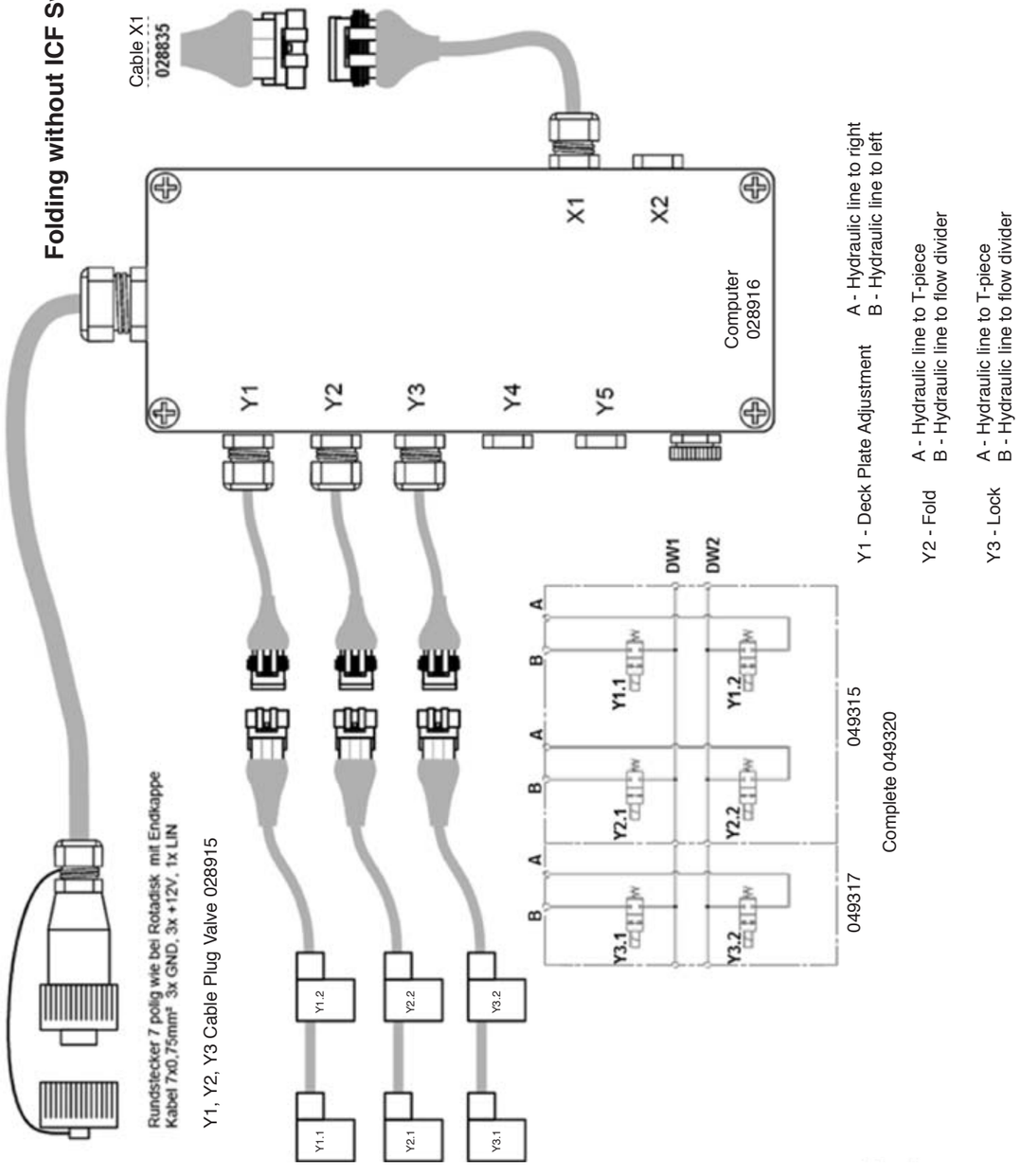


Y1 - Deck Plate Adjustment
A - Hydraulic line to right
B - Hydraulic line to left

Y4 - ICF Sweeper Fore/Aft
A - Hydraulic line to T-piece
B - Hydraulic line to flow divider

Y5 - ICF Sweeper Up/Down
A - Hydraulic line to T-piece
B - Hydraulic line to flow divider

Folding without ICF Sweeper



Fill out the PDI sheet for the head and it will be ready for delivery.
There is a copy of the PDI sheet in the Geringhoff Parts box and in the operators manual.

GERINGHOFF

Limited Warranty Registration Form & Retail Delivery Inspection Report

This form must be filled out by the dealer and signed by both the dealer and customer

Header Model: _____ Combine Model: _____
Serial Number: _____ Delivery Date: _____

Customer Name: _____
Address: _____ City: _____ ST: ___ Zip: _____
Email Address: _____ Phone #: _____

Dealer Name: _____ Sales Rep: _____
Address: _____ City: _____ ST: ___ Zip: _____

RETAIL DELIVERY INSPECTION REPORT

____ Check oil in crown gear box (PTO drive line) - field position - in bottom check plug
____ Check oil in miter gear box - center check plug
____ Row unit gear boxes - oil at proper level on dipstick
____ Grease row units - 3 grease zerks/row on Rota Disc | 2 grease zerks/row on Northstar
____ Grease PTO shafts and bearing connection
____ Auger chain drive - check for proper tension and alignment on sprockets
____ Install and ensure all working functions of shaft speed/deck plate moniter, and folding sensors
____ Install and ensure functionality of Headsight system (if applicable)
____ Check and adjust stationary knives if needed **(Rota Disc model only)**
____ Ensure all safety shields and decals are in place
____ Check and adjust knives - .5mm bottom, 1-2mm top **(Northstar model only)**
____ Add lock tight to bolts that hold the poly snout to the poly bonnet
____ Ensure hydraulic acting deckplates are timed correctly
____ Run header for 10 minutes to ensure all functions are working properly
____ Confirm receipt of Moniter, Operator Manual, and Chain tool with head

I have thoroughly instructed the buyer on the above described equipment and reviewed the operator's manual content, equipment care , adjustments, safe operation, and applicable warranty policy

Date: _____ Authorized Dealer Signature: _____

I acknowldege receipt of the above equipment and operator's manual. I have been throroughly instructed as to care, adjustments, safe opersation, and applicable warranty policy.

Date: _____ Owners Signature: _____

Limited Warranty not valid unless filled out and signed by both the dealer and the customer.
Must be faxed, emailed, or mailed by the dealer to Geringhoff within 30 days of delivery.

Geringhoff: PO BOX 490
Minot, ND 58702
Fax: 701-838-3595
Email: warranty@geringhoff.com

WHITE - GERINGHOFF *YELLOW - DEALER* *PINK - CUSTOMER*

Notes

Section 3 - General Maintenance

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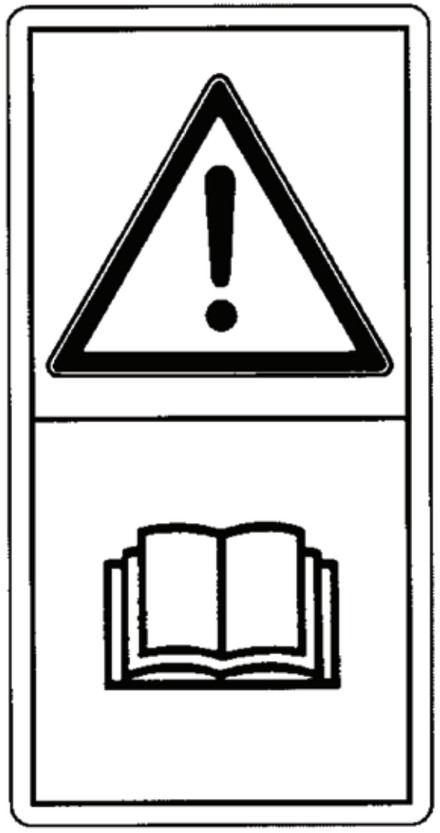
To prevent accidents, strictly follow these operating instructions and WARNINGS on the machine.

- Before starting the machine, CHECK for operational dependability and traffic safety!
- In addition to these operating instructions, also follow the current safety instructions.
- The warning signs and labels give important notes for the safe operation of the machine, thus serving the health and well-being of yourself as well as others.
- Prior to operating the machine make yourself familiar with all operating elements, safety procedures and functions. Ensure that all who will operate or come into close vicinity of the machine also have this knowledge.
- Check the driving characteristics, steering and braking behavior of any vehicle that will make use of or tow this machine.
- Load rating of the tires is to be checked and sufficient load capacity ensured.
- Sufficient hydraulic lifting power and stability of the lines are to be ensured.
- When working on the machine the provided supporting devices must be used.
- Admissible axle loads and total weight must consistently be observed.
- Before start-up all guards and maintenance holes must be in position and closed.
- While the machine is running be respectful of dangerous areas and adhere to warning labels at all times.
- Maintenance and repair work is to be performed only with engines shut down and drive lines disengaged.
- On public roads the legal provisions must be observed.
- If required, additional headlights for the road transport must be mounted (see local road transport licensing regulations).
- The instructions of the combine manufacturer must be observed as they pertain to operation of headers.
- The transport and operation of all machines including customized ones is made at your own risk.



CAUTION

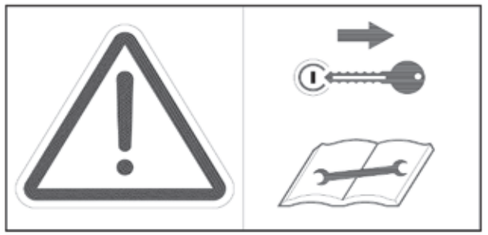
- The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.
- Protect yourself.

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

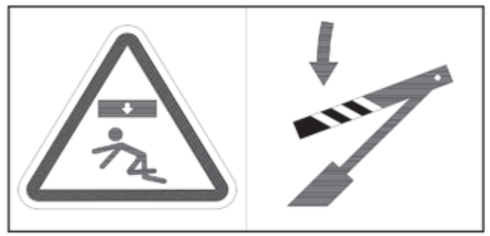
You may need:

- A hard hat.
- Protective shoes with slip resistant soles.
- Protective glasses or goggles.
- Heavy gloves.
- Wet weather gear.
- Respirator or filter mask.
- Hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs or ear plugs protects against objectionable or loud noises.
- Provide a first-aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine.
- Be sure the extinguisher is properly maintained and be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.
- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.
- Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.
- Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.
- Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.
- Keep machinery clean. Straw and chaff on a hot engine are a fire hazard. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.
- Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.

ISO 11684

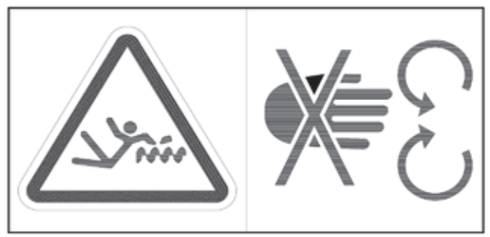


Prior to performing maintenance and repair work, turn off the motor and withdraw the key.

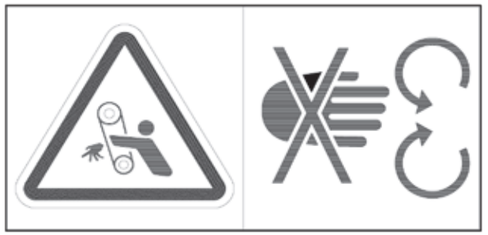


Insert lifting cylinder safety latches before entering dangerous areas.

Keep away from danger zones between the header and machine!

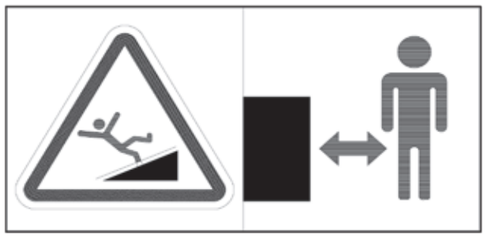


Keep clear of operating machinery.



While the motor is running, never allow guards to be removed.

While the machine is in operation, keep away from moving components.



Keep a sufficient safety distance to the header. Prior to maintenance works or clearing of clogged header, switch off motor and remove key. Keep clear of machine during operation to avoid flying debris.

Never go into the operational range of the machine.

GERINGHOFF

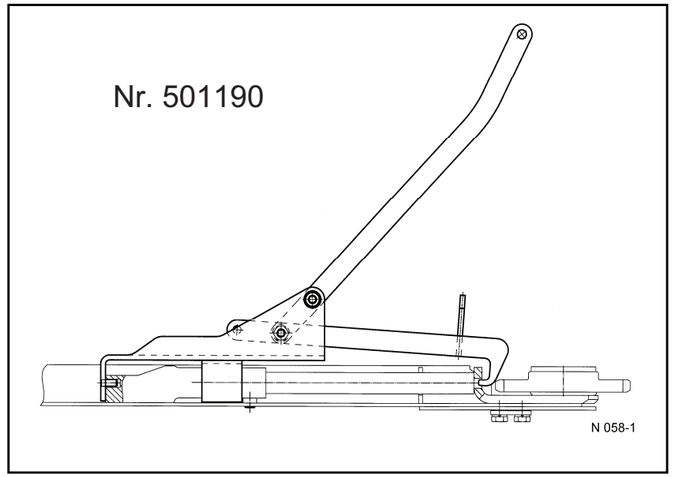
Removal of the Gathering Chains

The chains can be removed with ease by using a special tool, (part no. 501190) which is supplied with the header.

Prior to working on the machine, turn off the engine.

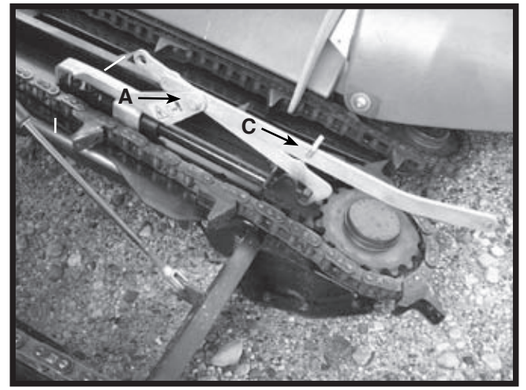
Special tool may release quickly when under pressure load.

It is recommended to re-position gathering chains once a year to left and vice versa to ensure uniform wear.



Removal of Front Chain

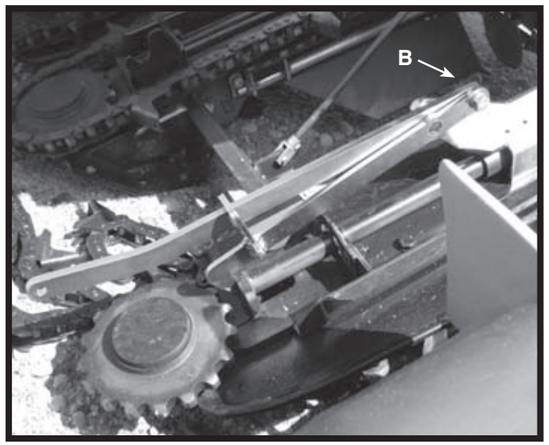
Place the special tool for chain removal to position (A), as shown image right, and pull closed. Secure lever under hook (C) and carefully remove chain.

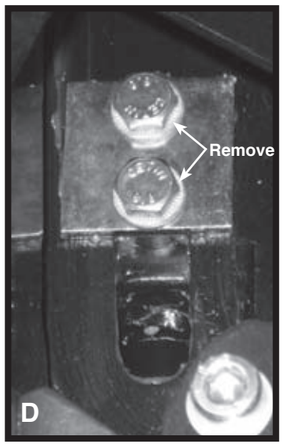


Removal of Front Chain Idler Sprocket

The removal of the front chain idler sprocket is done by changing the bolt on the hook arm of the special tool to position (B). Hook the tool in the same fashion as if you were removing the chain. When compressed, remove idler stops (Image D) from below. Dismount the front idler sprocket and release the lever of the special tool slowly and carefully.

CAUTION - chain removal tool may release quickly when under load.

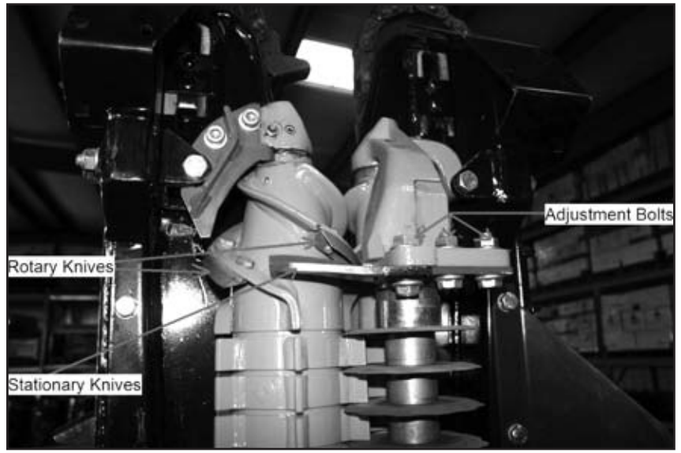




Idler stops underneath row unit.

Knives - Rota Disc

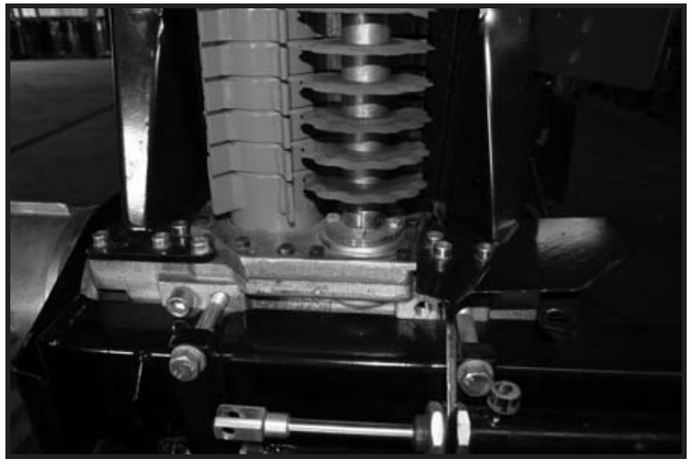
Adjust to the thickness of a business card (max 1mm) between stationary knife and rotary knife on one complete rotation of large roller. Once you have it set at .5mm please make one complete rotation on large roller to ensure there are no contact points between stationary knife and large rotor.



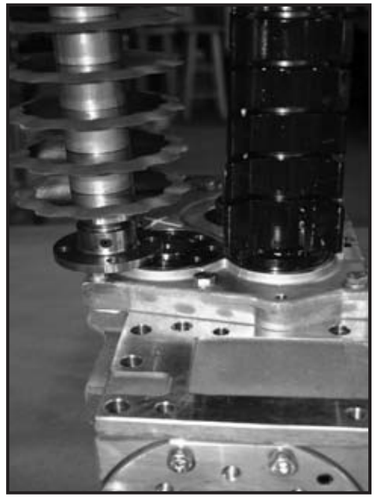
Removal of Rollers on RD

Remove the Rota Disc shaft. To do this, first remove the stationary knife, then remove the four allen head bolts on the bearing bracket.

Remove the four bolts on the bottom of the shaft.

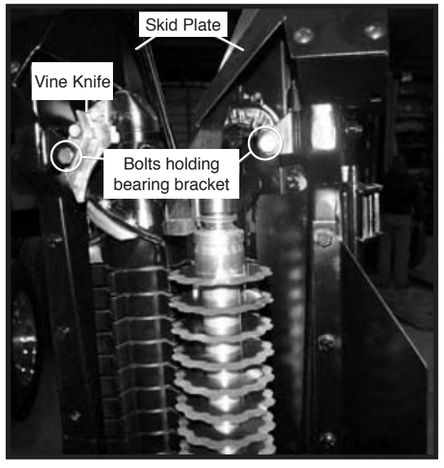


Slide out rotary knife assembly

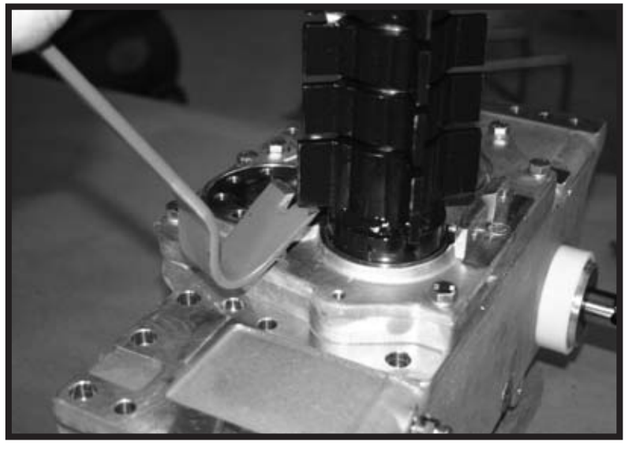


Removal of Large & Small Rollers

- Remove the skid plate
- Remove the vine knife
- Remove the bolts holding the bearing bracket



Remove rollers by using a pry bar.

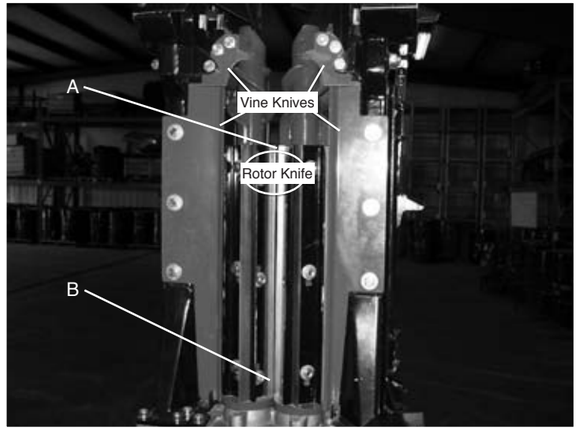


NorthStar Knives

Adjustments of vine knives and rotor knives.

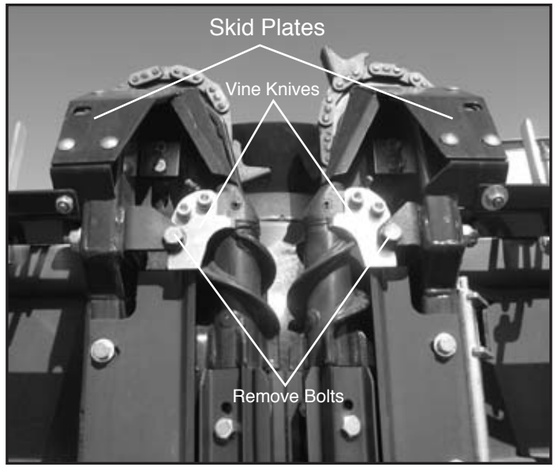
Adjust the knife gap to 1-2mm at the top (A) and .5mm at the bottom (B). Rotate knife rolls to ensure proper measurements on all four knives

Adjust the vine knife to .5mm. Once you have it set at .5mm please make one complete rotation on knife roller to ensure there are no contact points between vine knife and knife roller.



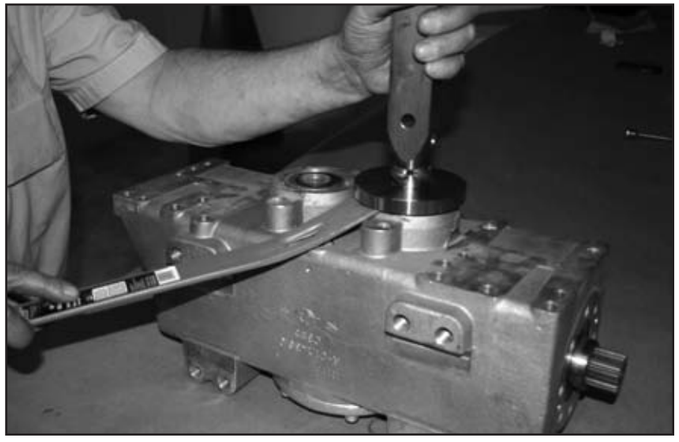
Removal of Rollers on NS if the Gearbox or Knife Rolls Require Service

- Remove Skid Plate
- Remove Vine Knife
- Remove bolts holding bearing bracket



Procedure for the removal of rollers on the Rota Disc and the NorthStar are similar.

Rollers and bearing mounts will be removed as one unit.

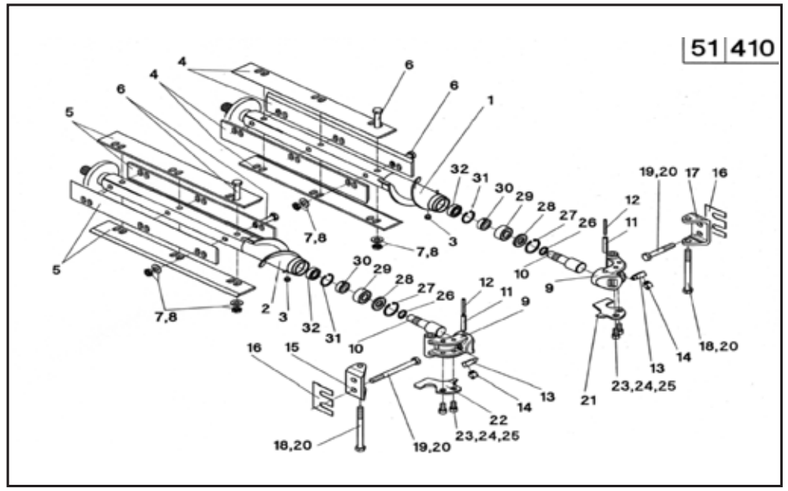


Remove Bearings & Mounts from Rollers

Bearings and mounts (9) must be removed to access the bearings on the end of the rollers (29, 32).

This is done by unscrewing mount from lock collar (30).

The removal process is similar on an RD.



Remove the plug (A) at the top of the roller.

This is a cover and when installed, should not be inserted past flush with the roller. Damage to roller & gearbox can occur if it is inserted too far.

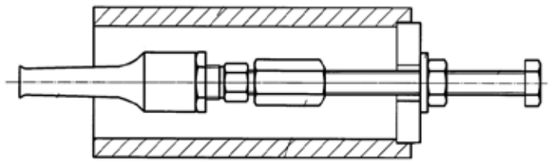
Rotate roller until allen head set screw is visible in the hole and remove it.

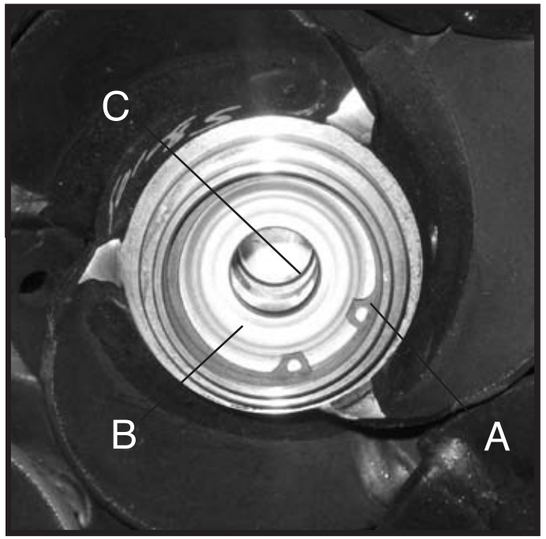
Rotate the roller 1/2 turn to expose an unthreaded hole in the lock collar. Insert a 1/4” x 1” bolt or small punch to hold the lock collar from turning.

With a rubber mallet tap the side of the bearing holder to start unscrewing. Unscrew and remove the bearing holder to expose the bearing on the end of the roller.

Removal of Bearing

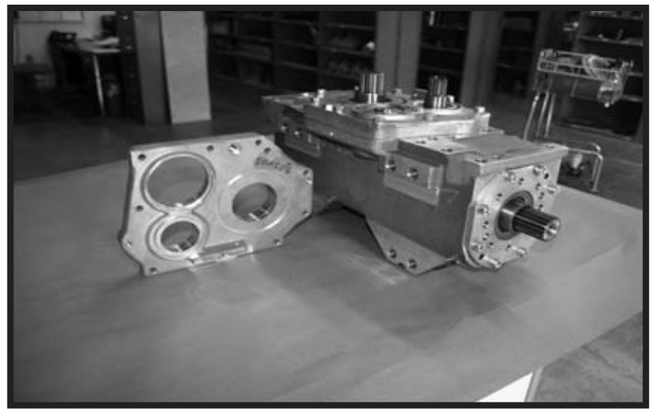
Remove snap ring (A).
Using bearing removal tool Part # 501165 remove first bearing (B).
Slide out lock collar (C).
Remove second snap ring and bearing in same manner.





Removal of Front Cover on RD Gearbox

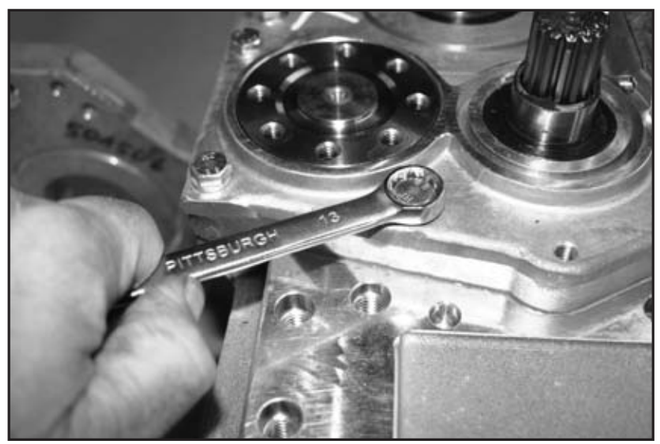
Remove cover to replace seal for knife shaft on 2008 and older Rota Disc gearboxes.



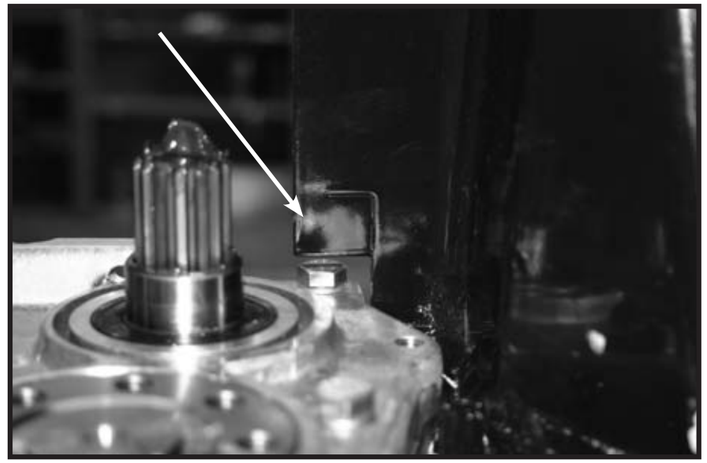
After all rollers are removed, the top of the gear box will be exposed. The seals on the rotors could be replaced at this time.

To replace the seal on the Rota Disc shaft you must remove the front cover.

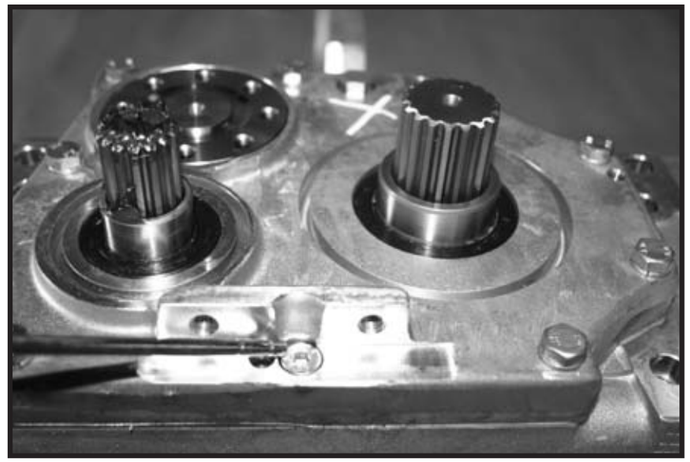
Remove the bolts from the front cover to disengage.



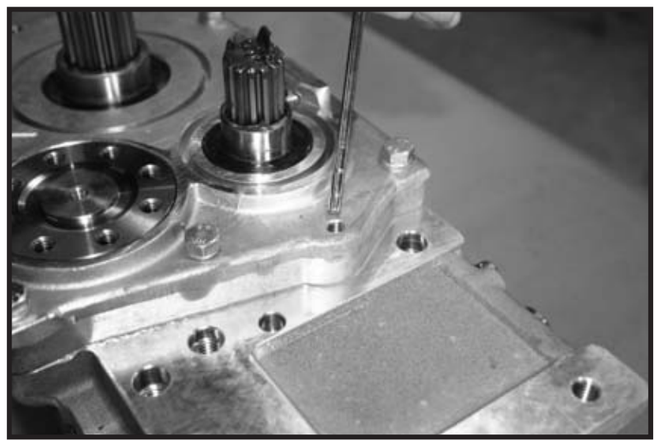
You will find one bolt under the row unit gearbox frame. To remove this bolt you will have to remove the knock out on the frame.



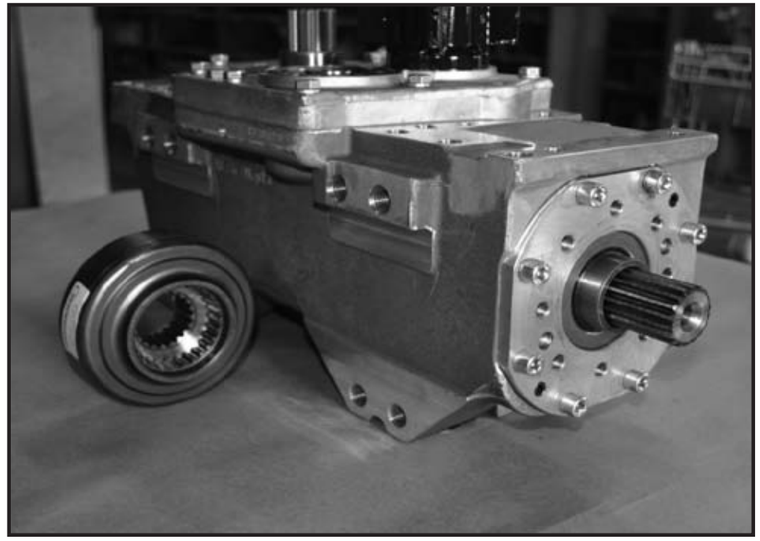
You will have to remove the cut off block to remove one bolt from the cover.



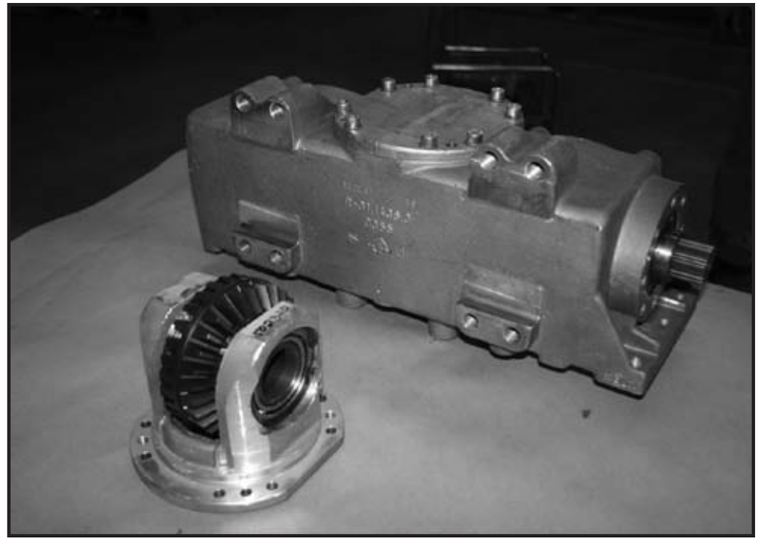
Install two of the bolts you removed into the threaded holes on each side of the cover. This will pop the cover free and allow you to replace the seal and perform other maintenance under the front cover.



Rota Disc Gearbox and Slip Clutch

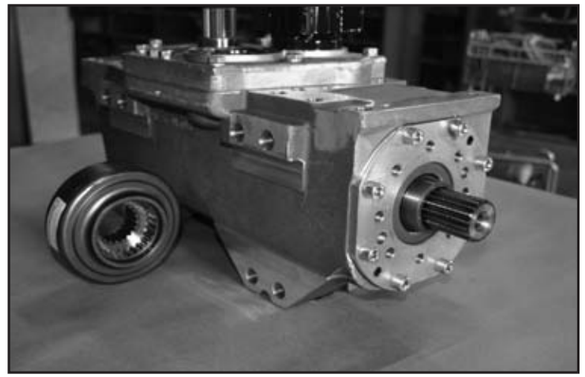


NorthStar Gearbox and Slip Clutch



Rota Disc Gearbox

In most cases the Rota Disc gearboxes must be removed to replace the slip clutches. To do this, remove the end plate and slide the shaft out to remove the slip clutch, as outlined in the gearbox repair instructions.

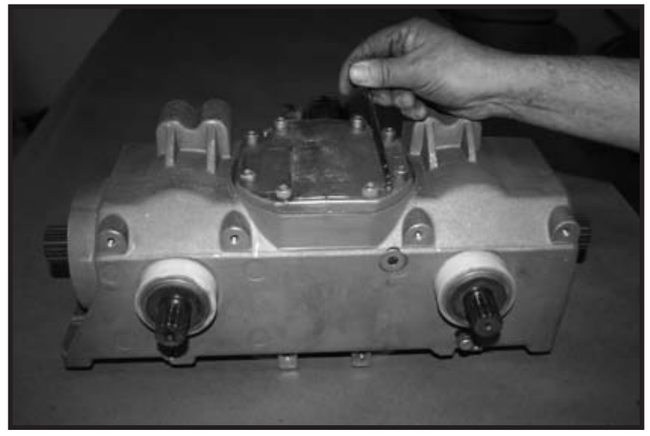


NorthStar Gearbox

On all NorthStar corn heads the row unit gearbox will have to be removed to change the slip clutch.

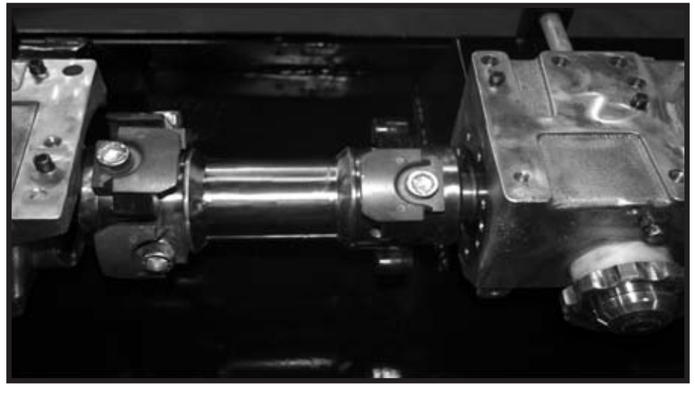
After the gearbox has been removed, remove the snap ring holding the shaft. Pull the shaft and unbolt the slip clutch from the back of the gearbox, as per gearbox manuals.

After you unbolt the slip clutch, reuse two of the bolts in the threaded holes on each side of slip clutch to pop it out.



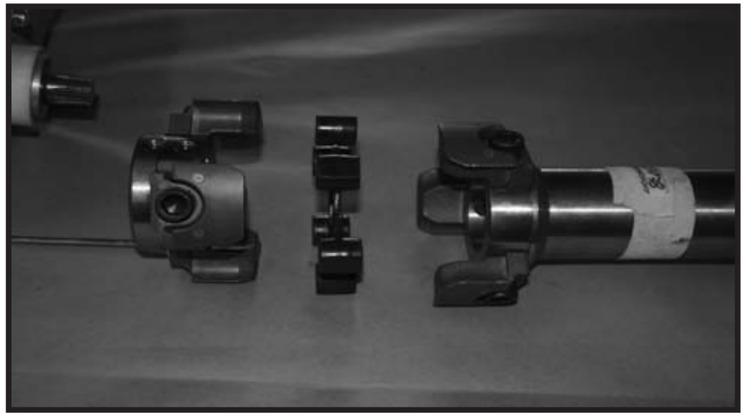
Drivelines

When you remove the gearboxes, you must also remove the drivelines on each side of the gearbox. This is done by removing the allen bolts holding the fingers on the coupler. Then remove the flex drive, and the driveline can be lifted out.



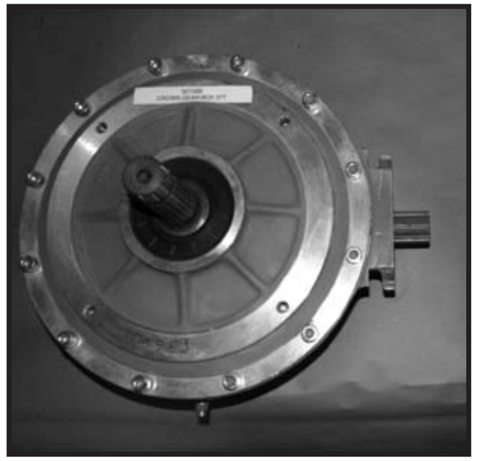
Drivelines

Pictured right is the driveline that has been dis-assembled.



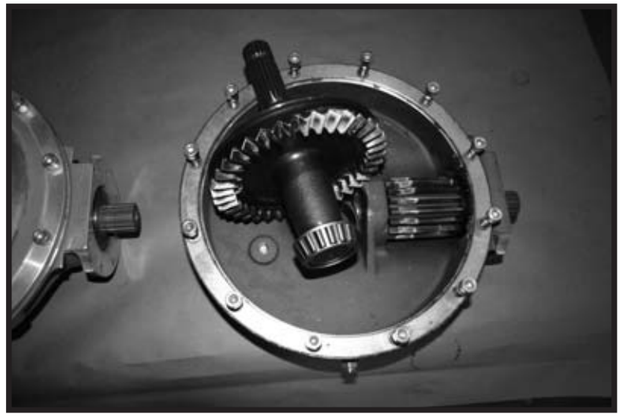
Crown Gearboxes

The crown gearbox is directly responsible for the RPM of the row units.



Crown Gearboxes

We use gears ranging from a 32 tooth to a 50 tooth depending on the combine and RPMs needed.
A lower number of teeth = slower row unit speed.



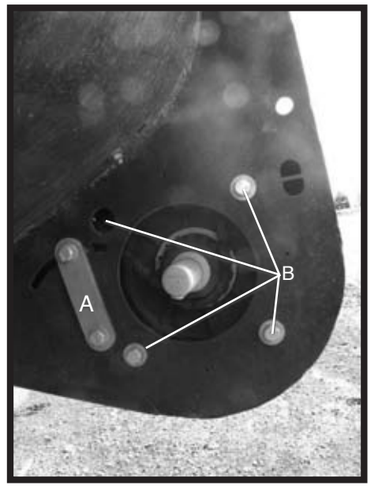
Removal of Crown Gearbox

To remove the crown gearbox you must first remove the shield covering the PTO shaft between gearboxes.

Remove the driveline.
Take slack off auger chain tensioner (A).
Remove the four bolts (B) then lift off the crown gearbox.

As you lift off the crown gearbox the driveline between the crown and miter gearbox will slide apart and can remain on the gearbox while changing the crown gear.

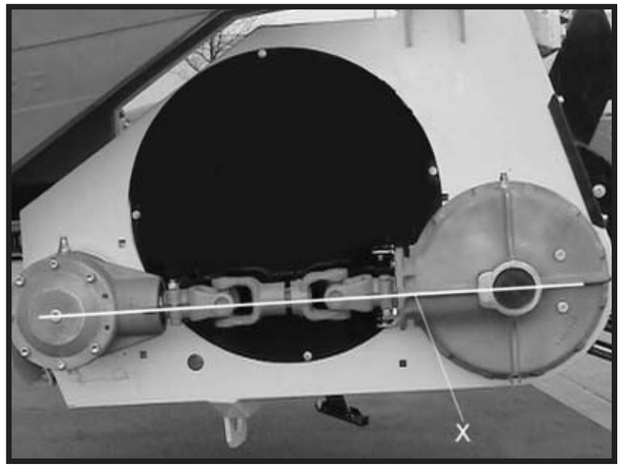
With the crown gearbox out remove the set screw on the auger sprocket. You may have to use a puller to remove the auger sprocket as Lock Tight has been used to secure it to the shaft. Reinstall using blue Lock Tight.



To change the crown gear, remove the cover, then remove the ten bolts that hold the crown gear to the shaft. Turn the shaft upside down and drive the shaft from the gear.

To reinstall a new gear, line up the holes and tap gear onto the roll pins that remained in the shaft. Use blue Lock Tight on bolts when reinstalling.

After reinstalling the crown gearbox ensure that the gearboxes and driveline are straight in line (X).

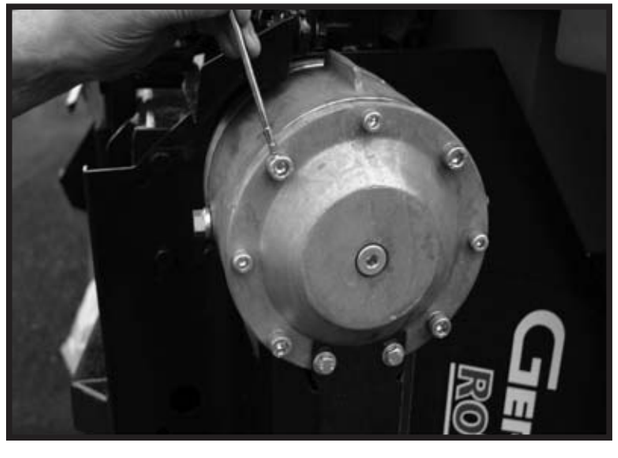


Miter Gearbox

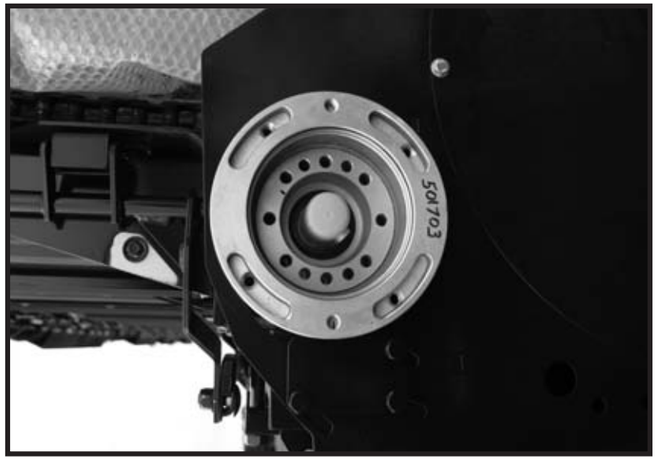
The miter gearbox mounts directly to the row unit gearboxes, and is used to transfer power to the driveline at a 90 degree angle.

Removal of Miter gearbox

Using an 8 mm allen wrench, remove the four bolts holding the gearbox. When bolts are removed rotate gearbox to separate PTO shaft. Pull off gearbox.



Next remove the backing plate by removing the eight bolts that secure it to the row unit gear box.



When reinstalling, ensure that the nut plate is installed before the backing plate is installed.

On the backing plate there are four slotted holes and two threaded holes. To line up the mount holes, the threaded holes should be at 6 and 12 o'clock. The slotted holes are to allow the gearbox to rotate after mounting so you can line up and time your PTO shaft.

After reinstalling the miter gearbox ensure that both gearboxes and drivelines are straight in line.

Auger Slip Clutches

We have three sizes of slip clutches:
- 1100 nm - yellow
- 1400 nm - gray
- 1700 nm - red

The 1100 is used on four row units.

The 1400 is used on six and eight row units.

The 1700 is used on the larger units.

To remove the slip clutch, first remove the auger drive chain, then take the center bolt out and pull the auger sprocket and slip clutch out as one unit. Separate the two after they are out.

When reinstalling, bolt the slip clutch in first, install the sprocket, then reinstall the auger chain.

Folding Headers: Leveling Wings, 2011 and older. (Frown Correction)

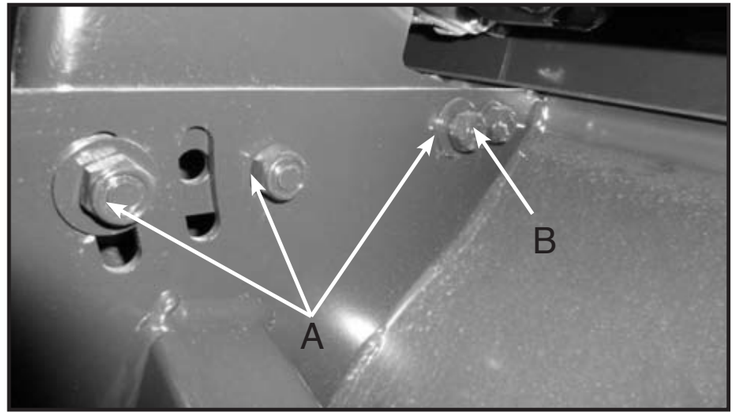
Lift header to working position.

With the feederhouse in the highest position, **make sure the feederhouse lock is in place.**

Loosen the first three (A) of the four bolts on the middle frame section.

Lower the head to the ground allowing the ground to bring the row units in line with wings.

Tighten all bolts.



Rigid and Folding: Header Angle Adjustment

Header angle should be adjusted by the combine feederhouse. However, if more adjustment is desired, follow steps listed below.

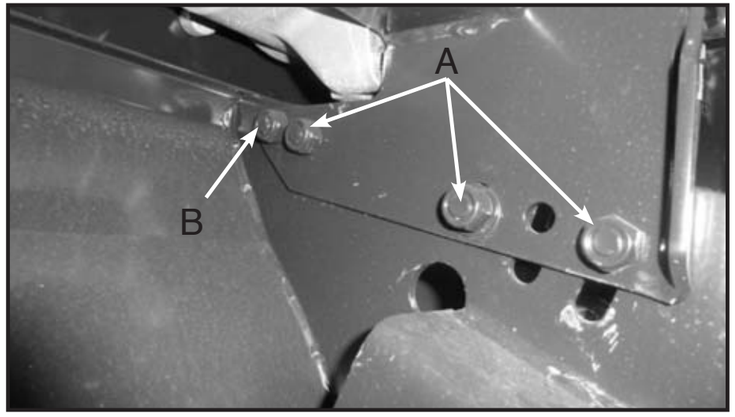
Lift header to working position.

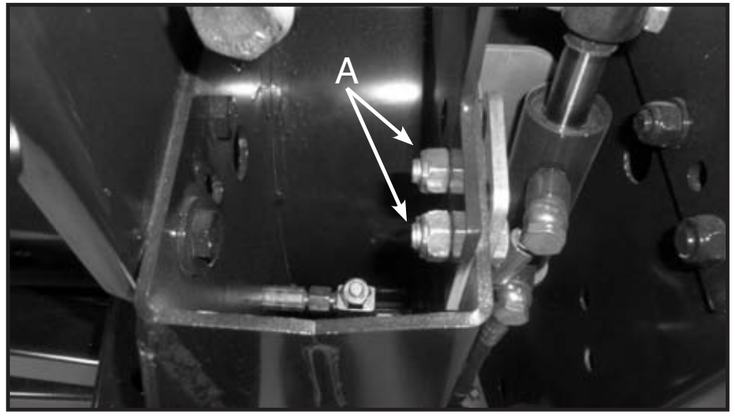
With the feederhouse in the highest position, make sure the feederhouse lock is in place.

Loosen the first three (A) of the four bolts on all sections.

Lower the head to the ground allowing the ground to change the angle of the head.

Tighten all bolts.





Notes

Section 4 - Service Hints & Suggestions

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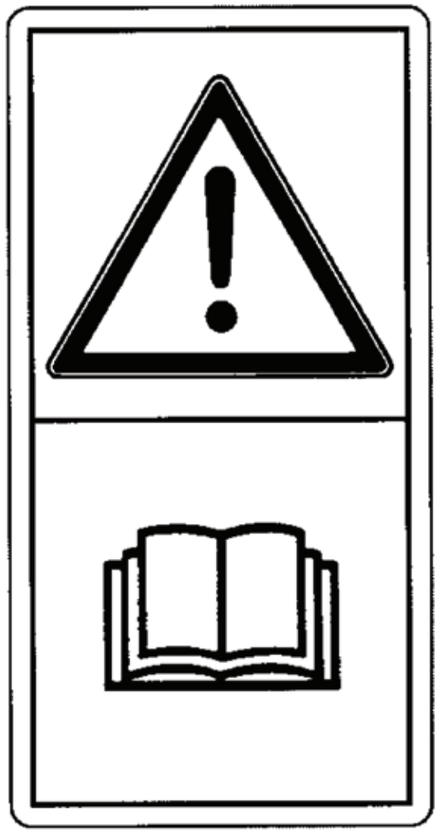
To prevent accidents, strictly follow these operating instructions and WARNINGS on the machine.

- Before starting the machine, CHECK for operational dependability and traffic safety!
- In addition to these operating instructions, also follow the current safety instructions.
- The warning signs and labels give important notes for the safe operation of the machine, thus serving the health and well-being of yourself as well as others.
- Prior to operating the machine make yourself familiar with all operating elements, safety procedures and functions. Ensure that all who will operate or come into close vicinity of the machine also have this knowledge.
- Check the driving characteristics, steering and braking behavior of any vehicle that will make use of or tow this machine.
- Load rating of the tires is to be checked and sufficient load capacity ensured.
- Sufficient hydraulic lifting power and stability of the lines are to be ensured.
- When working on the machine the provided supporting devices must be used.
- Admissible axle loads and total weight must consistently be observed.
- Before start-up all guards and maintenance holes must be in position and closed.
- While the machine is running be respectful of dangerous areas and adhere to warning labels at all times.
- Maintenance and repair work is to be performed only with engines shut down and drive lines disengaged.
- On public roads the legal provisions must be observed.
- If required, additional headlights for the road transport must be mounted (see local road transport licensing regulations).
- The instructions of the combine manufacturer must be observed as they pertain to operation of headers.
- The transport and operation of all machines including customized ones is made at your own risk.



GERINGHOFF

CAUTION

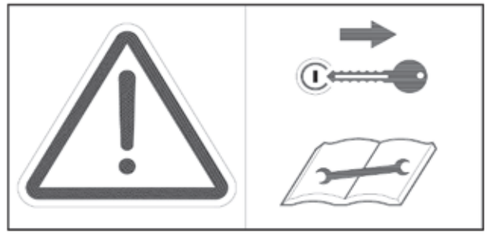
- The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.
- Protect yourself.

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

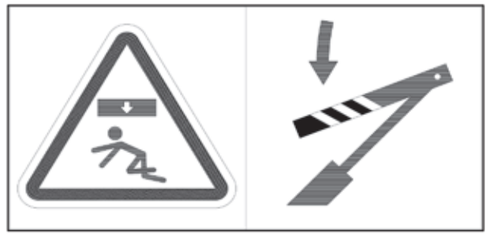
You may need:

- A hard hat.
- Protective shoes with slip resistant soles.
- Protective glasses or goggles.
- Heavy gloves.
- Wet weather gear.
- Respirator or filter mask.
- Hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs or ear plugs protects against objectionable or loud noises.
- Provide a first-aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine.
- Be sure the extinguisher is properly maintained and be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.
- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.
- Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.
- Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.
- Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.
- Keep machinery clean. Straw and chaff on a hot engine are a fire hazard. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.
- Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.

ISO 11684

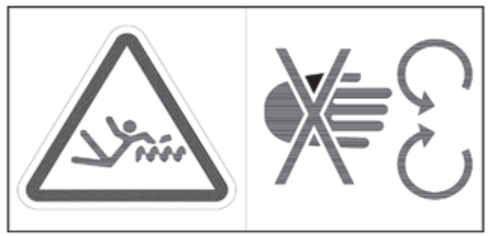


Prior to performing maintenance and repair work, turn off the motor and withdraw the key.

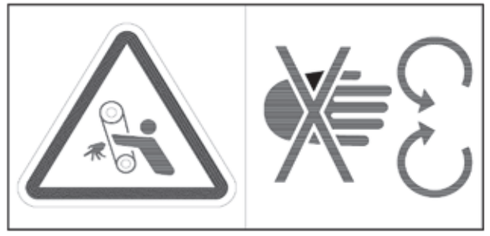


Insert lifting cylinder safety latches before entering dangerous areas.

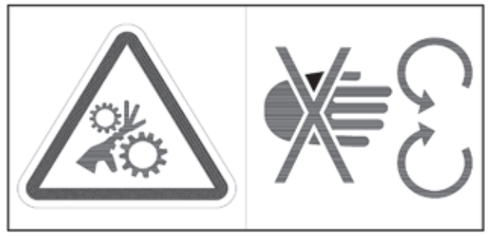
Keep away from danger zones between the header and machine!



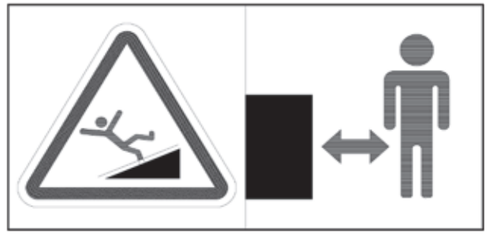
Keep clear of operating machinery.



While the motor is running, never allow guards to be removed.



While the machine is in operation, keep away from moving components.



Keep a sufficient safety distance to the header. Prior to maintenance works or clearing of clogged header, switch off motor and remove key. Keep clear of machine during operation to avoid flying debris.

Never go into the operational range of the machine.

The following hints & suggestions have been developed by Geringhoff corn head dealers and owners. Please use them at your discretion and remember to always read and follow combine manufacturer specifications.

Things to try if you are running in other than normal conditions.

Down Corn

- Remove the black cob savers and brackets on the back end of the dividers.
- Remove the shields from outer bonnets.
- “Fingers” or “claws” work well when installed on the auger. Geringhoff part # 512253 – 512254 is an option through parts.
- Install down corn tips (Down corn poly tips became standard equipment in 2008).
- Install spring kits on dividers to help hold tips down. Spring kits became standard equipment in 2010 on all heads. 2008 and prior, the spring kits were only used on the wings on folding heads Part # 504037.
- Run head close to the ground.
- Remove gathering chain and reverse direction. This will make the chains more aggressive and grabbing and pulling stocks.
- In severe down corn, you can flatten the head to help scoop up down corn that is laying flat on the ground. A NorthStar head can run at 20 degrees. With an RD head you can run at 22 or 23 degrees. With the RD head you will want to remove the stationary knives when running at this angle. This will leave a longer stalk, but will work. If the knife is left on it tends to push the stalk and not cut as well.
- Add aftermarket Crop Sweeper (2011 and earlier models), or Geringhoff ICF Sweeper (2012 and newer models).
- Add optional End Row Augers.

Fluff

- Remove rubber paddles from auger.
- Remove cob savers and brackets from bonnets.
- Run gathering chains backwards.
- Help gathering chains pull more into auger by removing silver moons on the bottom of the back side of bonnets, and replace with an oversized one (part # 504198 and 504199). On the left side of the head install the 504198 over the left side gathering chain. On the right side of the head install the 504199 over the right side gathering chain.
- With really bad fluff, remove the ear savers.
- Check the gap between auger and feederhouse.
- Raise the auger up.
- Speed up the auger on 12 row and larger heads.
- Install the “fingers” or “claws” supplied with head when new. Geringhoff part # 512253 – 512254.
- Add aftermarket Crop Sweeper (2011 and earlier models), or Geringhoff ICF Sweeper (2012 and newer models).

Shelling/Shatter

- If you are running in standing corn, try to go a little faster. This will allow more fodder in the head and cushion the cobs hitting the deck plates.
- Raise your head and cut at higher distance from the ground.
- Slow down the RPMs on your head. We recommend that you not go below 680 RPMs on a RD head, and 710 RPMs on a NorthStar. This can be done easily if your combine has a variable drive. If it is direct drive you will have to change the crown gears. For example on a Case 2300 series you will have to take out the 47 tooth crown gear and install a 44 tooth crown gear (see section 3 of service guide).
- When you have excessive butt shelling and you slow down the head, on 12 row and larger units, you may have to speed up the auger (from 16 tooth to 19 tooth).

Ears Falling Before They Get Into Corn Head

- The variety of corn can affect this.
- Install rough terrain bonnet guide part # 505392
- Make sure that guides for the gathering chains are adjusted all the way out. On the NorthStar and some of the RD heads loosen the three bolts holding chain guide (2 by idler sprocket and one by auger end).
- If head is older than 2010 install closed style deck plates part # 501820 and 501823.
- Raise the corn head and lower the row dividers.

Row Unit Slip Clutch is Releasing too Frequently

- Tools needed:
  - ¾ inch torque wrench,
  - wood block to go in between the rollers
  - 21-spline yoke to fit the PTO end of the crown gearbox with the bearing cap holder cut off and a socket with a ¾ drive welded to the yoke.
- To check the row unit on a head you must know the number of teeth in the crown gear in the head. It will be marked on the side of the crown gearbox.
- The row unit slip clutch is preset at 600 N-m or 444 Ft-lb (+ - 30).
- The minimum acceptable is 520 N-m or 385 Ft-lb to make the row unit works properly.

- The N-m or Ft-lb reading will be different depending on the crown gear on your head. 520 N-m will read 520 with a 32 tooth crown gear, but 520 N-m will read as 760 N-m with a 47 tooth crown gear.

- Stick the block in between the rollers of the unit to be checked, place the modified yoke on the crown gearbox and roll in the correct direction until the torque wrench clicks. Remember the number on the torque wrench.

- To determine if the slip clutch has sufficient resistance, take the minimum torque setting, multiply by the number of the crown gear, then divide by a constant of 32 and this will be the minimum Newton-meter (N-m) the slip clutch on your head can run at.

- Example:
  - 520 x 32/32 = 520 N-m = 385 Ft-lb
  - 520 x 37/32 = 601 N-m = 445 Ft-lb
  - 520 x 42/32 = 682 N-m = 505 Ft-lb
  - 520 x 47/32 = 764 N-m = 566 Ft-lb

- To convert Newton-meters (N-m) to Foot-pounds (Ft-lb) divide the N-m by 1.35.

Gearbox Maintenance

- DO NOT use synthetic oil in any of the gearboxes. Use of synthetic oil will void the warranty on gear boxes. We have tried synthetic oil and found it to cause the seals to leak. We use 80/90 wt gear oil and did not have a problem with seals. We recommend 80/90 gear oil.

- The fill plug will be tight. To ease its removal, disengage the plug by hitting it in the center with a punch and a hammer to break the seal.

- When checking the oil levels in any of the gearboxes do it with the head on the ground in field position. The readings on the dip sticks will be the same, and it is a safer way to work on the head.

- Check the torque of all drain plugs and fill plugs on the gearboxes.
  - All fill plugs should be Torque to 35 ft lbs.
  - All drain plugs should be Torque to 25 ft lbs.

Formula for Crown Gear on an RD

- The formula for figuring the crown gears needed for running the head with any given combine is:

  - Combine shaft speed times the number of teeth on the crown gear, divided by 32 (the # of teeth in the miter gear box). This equals the rpm's on the Geringhoff monitor.

    Example:

    Case 2300 series combine
    510 RPM x 47 tooth divided by
    32 tooth = 749 RPM

- With this formula you can figure backwards to find out what crown gear you have or need as long as you know both RPMs.

- This can come in handy if you run into a gearbox that was changed but not remarked with proper gear stamp.

Latches for Bonnets

- The latches can become unhooked, and then the J bolt might unthread, fall out and become lost. You can add a nut on the J bolt to use as a lock nut to keep the J bolt in place.

Inspection Check List for End of Season on Geringhoff Corn Head

- ☐ Oil leaks – all gearboxes
- ☐ Oil level in all gearboxes – Change once a year or every 500 hours
- ☐ Clean breathers on all gearboxes
- ☐ Poly flex couplers and drive couplers between row units
- ☐ Gathering chain wear
- ☐ Front idler sprocket on gathering chains
- ☐ Chain guide rails
- ☐ Deck plates adjustments
- ☐ Plastic slider guides
- ☐ Ear savers
- ☐ Auger sprocket and chain - lube chains
- ☐ PTO bearings and yokes between miter and crown gearboxes
- ☐ PTO bearings and yokes on combine drivelines
- ☐ Pull drivelines apart and grease shafts
- ☐ Bearings on front of rollers
- ☐ Grease row units
- ☐ Grease couplers on folding head
- ☐ Wiring
- ☐ Clean behind (under) deck plates

Rota Disc Corn Heads

- ☐ Stationary and rotary knives for wear and gap setting
- ☐ Rota Disc for wear
- ☐ Large and small rollers for wear
- ☐ Clean behind (under) deck plates

NorthStar Corn Heads

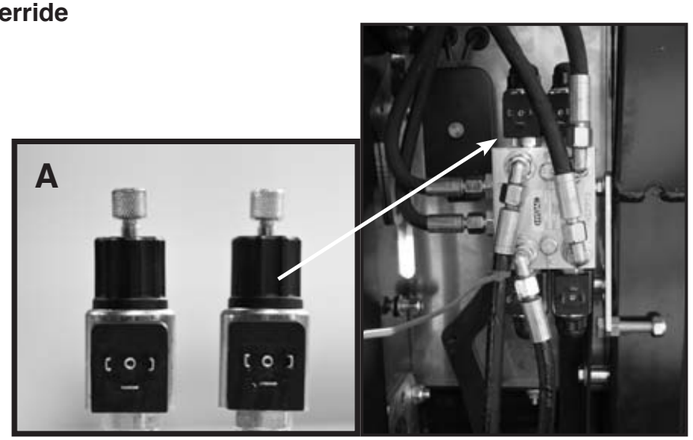
- ☐ Knife rolls - wear & adjust gap setting
- ☐ Vine knife – check clearance
- ☐ Clean behind (under) deck plates

Geringhoff Folding Heads

- ☐ Couplers between drive line, row units and auger
- ☐ Clean behind (under) deck plates

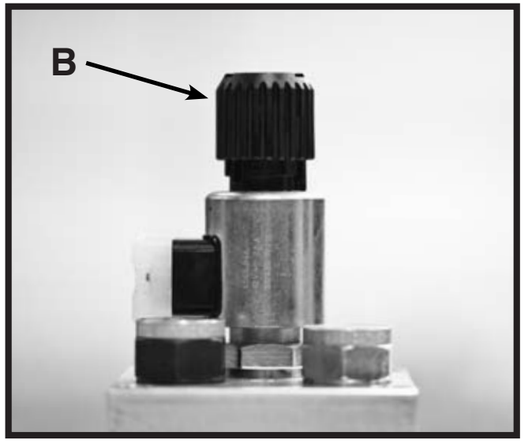
Hydraulic Folding System Override (2012 Machines)

In the case of electronic malfunction, you can override the hydraulic system with these caps with threaded bolts on top (A) part # 041693. Remove the factory cap (without bolt) and replace with these, then manually turn threaded bolt down to bypass function of monitor. For more information, contact Geringhoff for service bulletin.

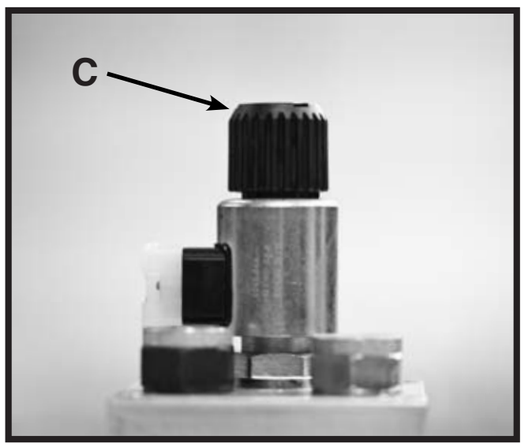


Hydraulic Folding System Override (2011 Machines and older)

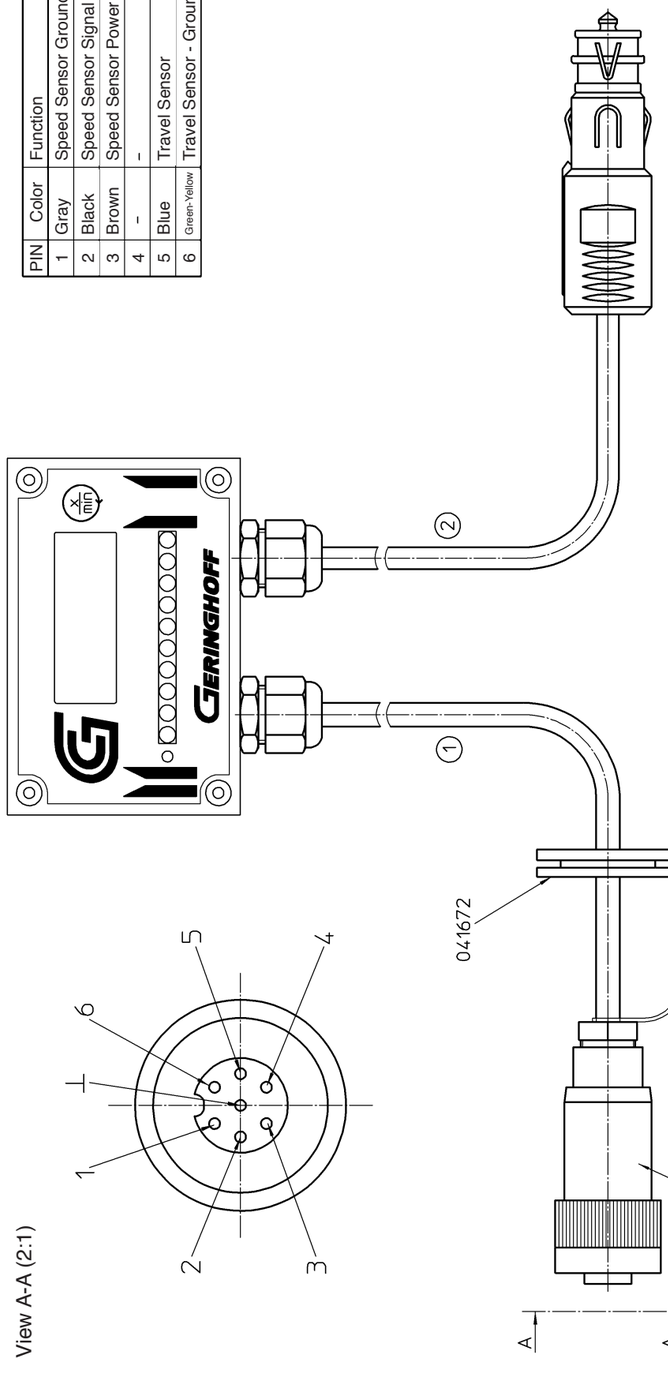
In case of electronic malfunction, you can override the hydraulic system. Shown here is the position of the black manual override for monitor use (B).



You can press the Black manual override down and twist to lock it in the down position to fold the machine (C).



PIN	Color	Function
1	Gray	Speed Sensor Ground
2	Black	Speed Sensor Signal
3	Brown	Speed Sensor Power Supply
4	–	–
5	Blue	Travel Sensor
6	Green-Yellow	Travel Sensor - Ground



2011 and older models

3	AM4236 | Bezeichnung der Anschlüsse überarbeitet					24.1.11	SVoe
2	AM1394 | Zeichnung vervollständigt					7.10.04	SVoe
1	Beschriftung von Roto – Disc* auf Geringhoff geändert					21.3.01	Moy
Ind	Beschreibung der Änderung					AM-Nr.	Name
						gez.	21.3.01	Moy

GERINGHOFF

MASCHINENFABRIK
CARL GERINGHOFF GMBH & CO KG
D-59227 AHLEN

Description
Display Unit - Deck Plate - Speed

Stufe FREIGEGEBEN 28.1.11 SVoe

Zeichn. 026680

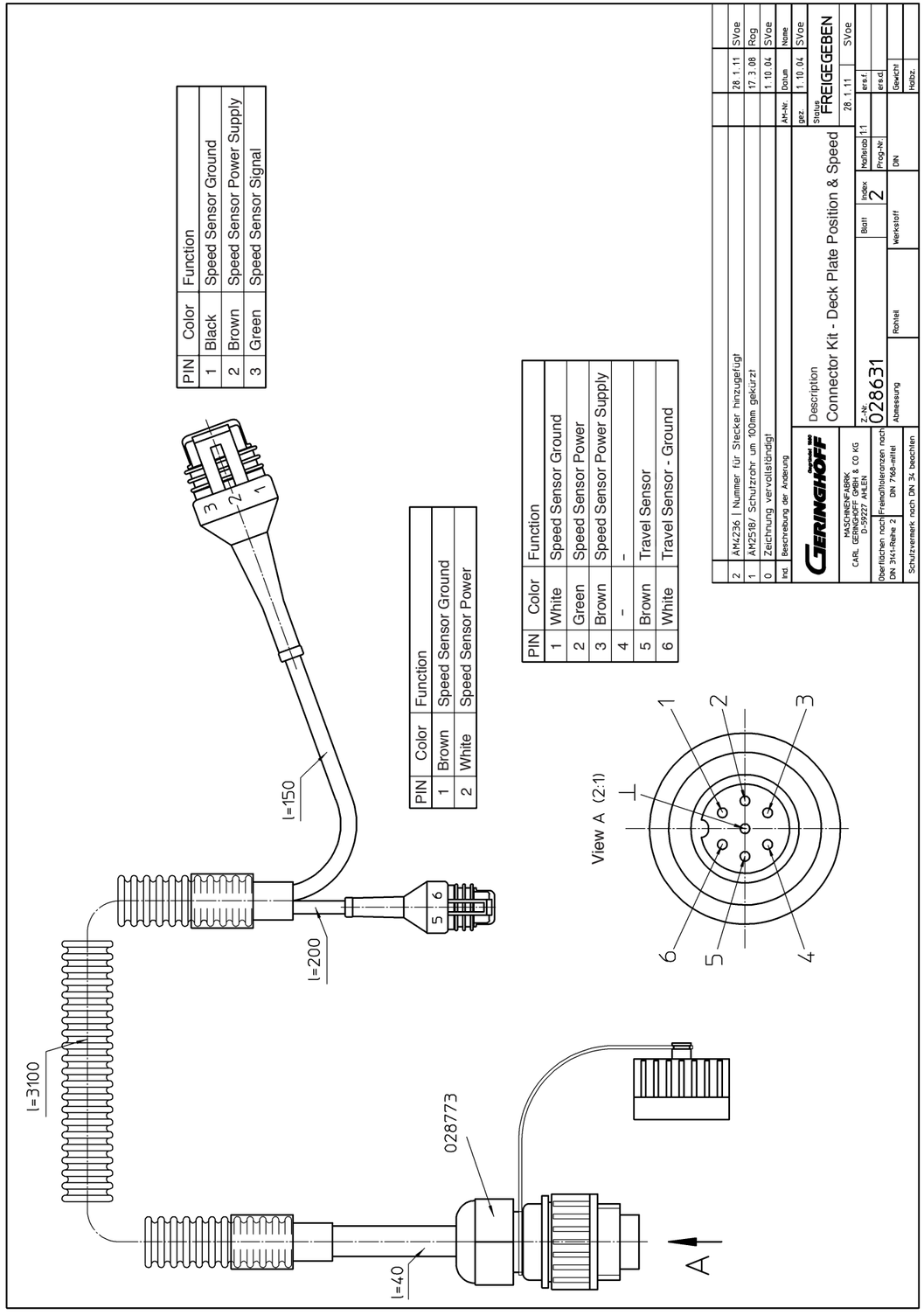
Blatt | Index 3 | Maßstab 1:1 | ers.f. | ers.d. | Gewicht

Werkstoff | Prog-Nr. | DIN

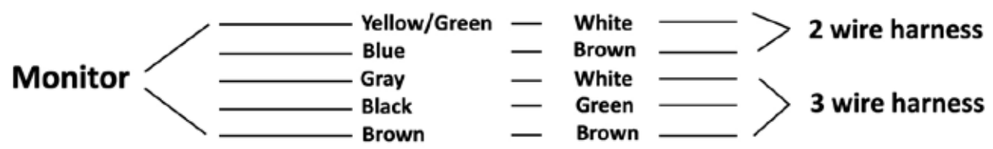
Oberflächen nach DIN 3141-Reihe 2 | Freimaßtoleranzen nach DIN 7168-mittel | Rohteil | Abnessung

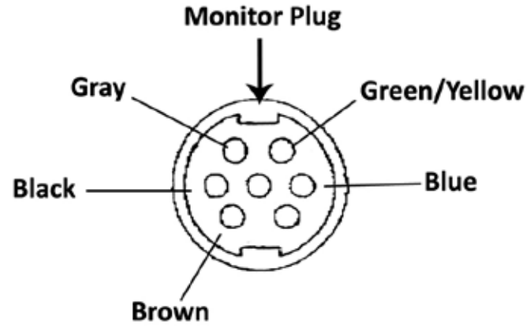
Schutzvermerk nach DIN 34 beachten

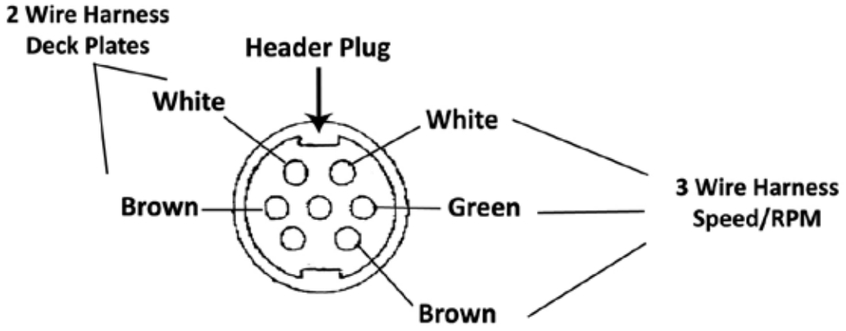
2011 and older models



2011 and older models







Notes

Section 5 - Rota Disc Elite & NorthStar Elite Supplemental Updates

Rota Disc and NorthStar Elite

Corn Header - Supplemental updates for 2012 Elite Series headers including: Hydraulics, deck plates and optional accessories.

Geringhoff USA

205 - 46th Ave. NE
P.O. Box 490
Minot, ND 58702-0490

Tel: 701.852.1876
Fax: 701.838.3595
www.geringhoff.com

Section 5

3 Prior to commissioning/start-up

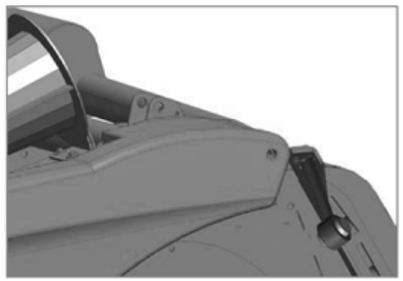
3.1 Assembling additional lighting

DANGER

- Always assemble additional lighting prior to machine commissioning/start-up!

The use of the additional lighting is required by law and additional lighting has to be installed after delivery of the machine.

1. Install additional lighting on the intended position according to the figure and check for proper function.



Additional lighting on delivery

Additional lighting in correct position

Connecting the additional lighting with the terminal box

2. Establish an electrical connection with the combine harvester.

Arrow: Input additional lighting

3.2 Attaching the corn header to the harvester

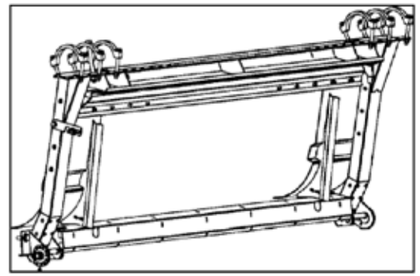
DANGER

Danger of injury!

- Only carry out work on the machine when the diesel engine is switched off!
- When attaching the header, take safety precautions!
- Ensure that there are no persons between the combine harvester and the header!
- Observe the load bearing capacity of the combine harvester and the tires!
- Adhere to the combine harvester manufacturer's specifications!

The corn header is designed according to the order, making an uncomplicated assembly possible.

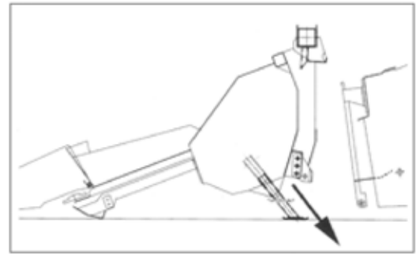
By replacing adapter frames, hydraulics and drive components, a harvester type different from the one indicated in the order can be used.



Adapter frame

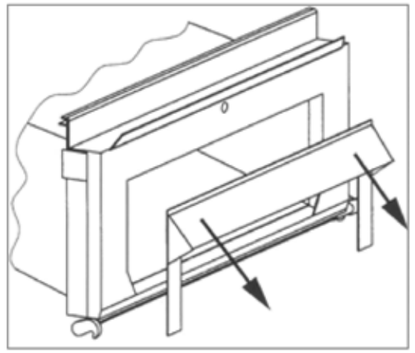
1. Move the corn header to its harvesting position.
2. Fit the support legs in their support position (for initial assembly, if necessary turn the support legs by 180°).
3. Remove the transport frame.

Support legs in transport position



Support legs in support position

4. Remove the channel splash guard from the combine harvester.



Remove the channel splash guard

5. Move the combine harvester and header into the correct intake position.

3.3 Connecting the adaption and the hydraulic multi-coupling (For Case Combines only)

Locking the adaption

DANGER

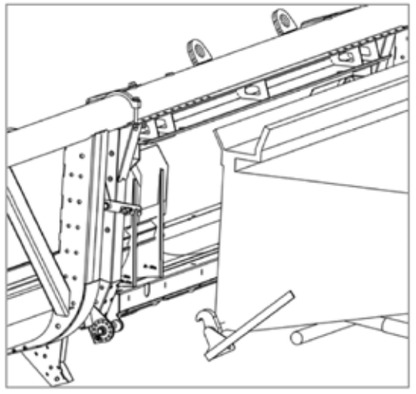
Danger of injury!

- Always activate the lowering protection before working on the header!

1. Ensure that the locking lever on the intake channel is open.

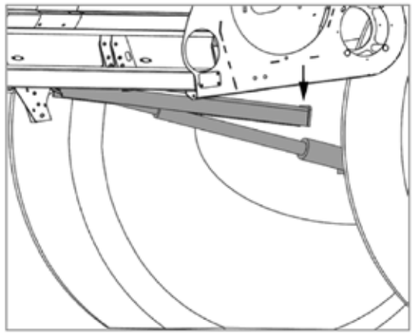
Lock in open position.

2. Insert the header into the combine harvester far enough that the lowering protection can be activated. While doing so, ensure that the channel holding fixture is securely hooked in.



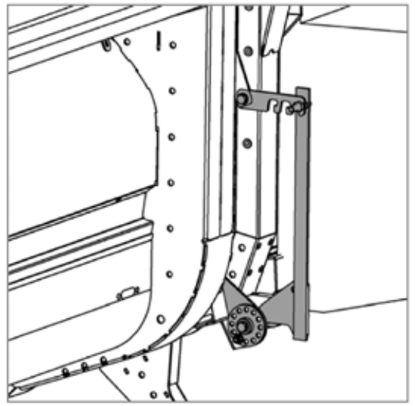
Header prior to mounting

3. Activate lowering protection!



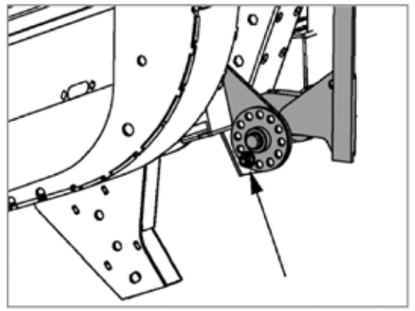
Activated lowering protection

4. Throw the locking lever of the intake channel and securely hook it into the intended section of the header.



Hook in locking lever

5. If necessary, remove the screw of the eccentric connection and set the eccentric shaft so the connection between the locking hook and the header is secure and free of clearance. Subsequently re-secure the eccentric connection by means of an appropriate screw.



Activated lock with eccentric screw (arrow)

Connecting the hydraulic multi-coupling (Case)

DANGER

- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

On delivery the multi-coupling (plug) is secured on the carrying device of the combine harvester.

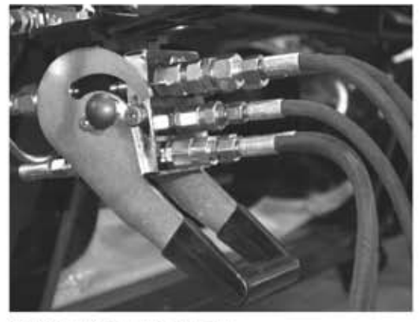
Multi-coupling on the combine harvester

1. Remove the multi-coupling from the carrying device.
2. Ensure that the plug and the coupling are clean.

Remove the multi-coupling

3. Attach multi-coupling to header and throw the lever.

Adhere to the combine harvester manufacturer's specifications!



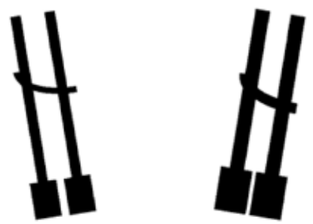
Multi-coupling on the header

Connecting the hydraulic without multi-coupling (Case)

DANGER

- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

Connect the hydraulic lines of the combine harvester with the header as shown in the following figures:



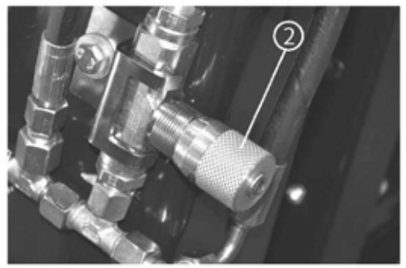
Hydraulic hoses bundled in pairs
LH side, picking plate adjustment, RH side reel drive, sweeper

Hydraulic lines of the harvester;
LH side PPV, RH side reel drive, sweeper

Mixing up is impossible due to the different arrangement of plugs and the coupling.

Rotational speed reduction valve (Case)

Use the control valve (2) to set the rotational speed of the sweeper and the corn auger thus that sufficient adjustment is possible by using the combine harvester function "Reel fast/slow".



Rotational speed reduction valve New Holland

3.4 Connecting the adaption and the hydraulic multi-coupling (Lexion Combines)

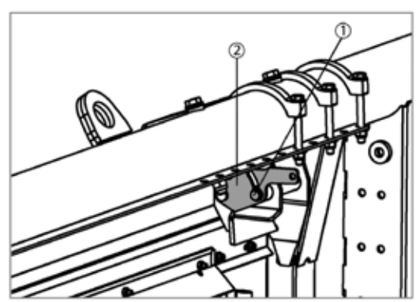
Locking the adaption

DANGER

Danger of injury!

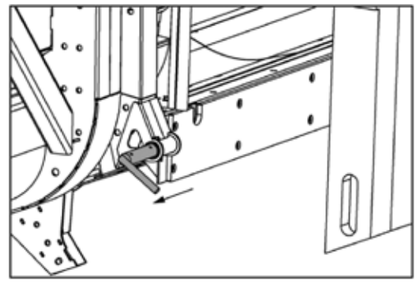
- Always activate the lowering protection before working on the header!

4. Undo the LH and RH screws (1) and swivel the upper locking lever (2) upwards.



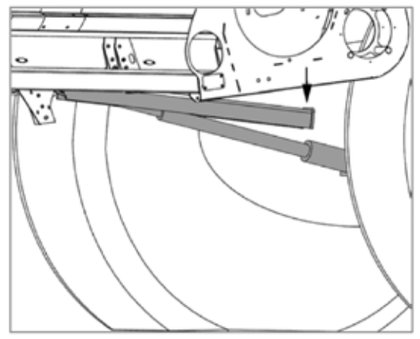
Locking lever in open position

5. Undo the spring cotter and pull back the locking bolt (gray).



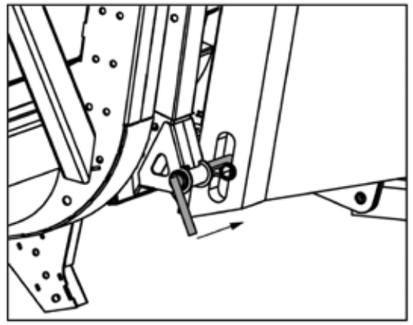
Pull back locking bolt

6. Insert the header into the combine harvester far enough that the lowering protection can be activated. Subsequently activate the lowering protection!



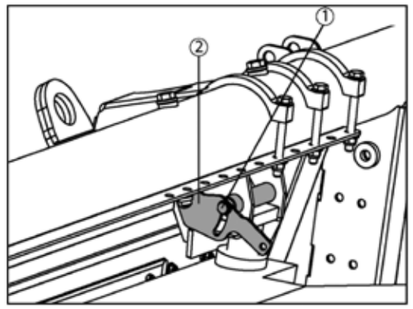
Activated lowering protection

7. While doing so, ensure that the channel holding fixture is securely hooked in. Push in the locking bolt and secure it with the spring cotter.



Push in locking bolt

8. Swivel the upper locking lever (2) downwards and tighten the LH and RH screws (1) (wrench size 17).



Locking lever in closed position

Connecting the hydraulic multi-coupling (Lexion)

DANGER

- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

When delivered the multi-coupling (plug) is secured on the carrying device of the combine harvester.

Multi-coupling on the combine harvester

1. Remove the multi-coupling (plug) from the carrying device.
2. Ensure that the plug and the coupling are clean.

Remove the multi-coupling

3. Attach the multi-coupling to the header and tighten the screws.

➲ Adhere to the combine harvester manufacturer's specifications.

Attach and tighten screws

3.5 Connecting the adaption and the hydraulic multi-coupling (John Deere Combines)

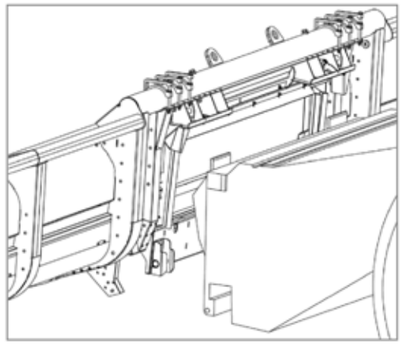
Locking the adaption

DANGER

Danger of injury!

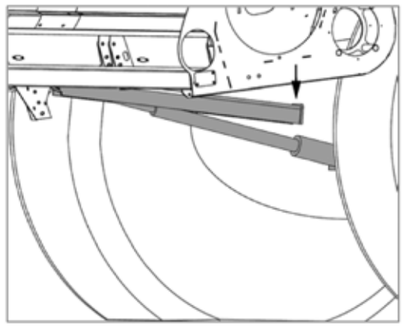
- Always activate the lowering protection before working on the header!

1. Insert the header into the combine harvester far enough that the lowering protection can be activated. While doing so, ensure that the channel holding fixture is securely hooked in.



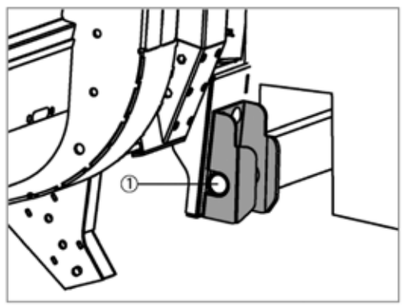
Header prior to mounting

2. Activate the lowering protection!



Activated lowering protection

3. Ensure that the bolts lock correctly. If necessary, align pos. 1.



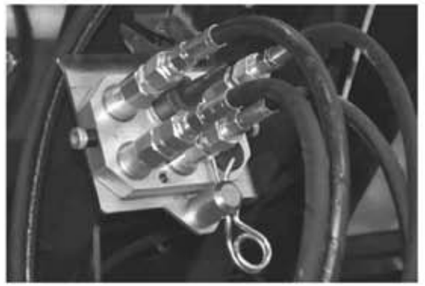
Securely locked bolts

Connecting the hydraulic multi-coupling (John Deere)

DANGER

- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

On delivery the multi-coupling (plug) is secured on the carrying device of the header by means of a spring cotter.



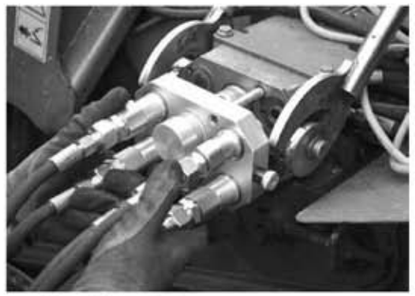
Multi-coupling on the header

1. Remove the multi-coupling (plug) from the carrying device.
2. Ensure that the plug and the coupling are clean.

Remove the multi-coupling

3. Attach multi-coupling to combine harvester and completely throw the locking lever.

Adhere to the combine harvester manufacturer's specifications!



Attach and throw the lever

Adapt hydraulic group to the header (John Deere)

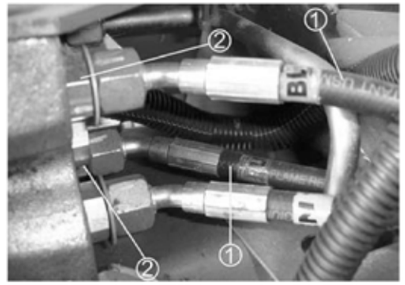
To increase the folding speed for foldable headers and/or to increase the lifting speed when using the sweeper, carry out the changes described below.

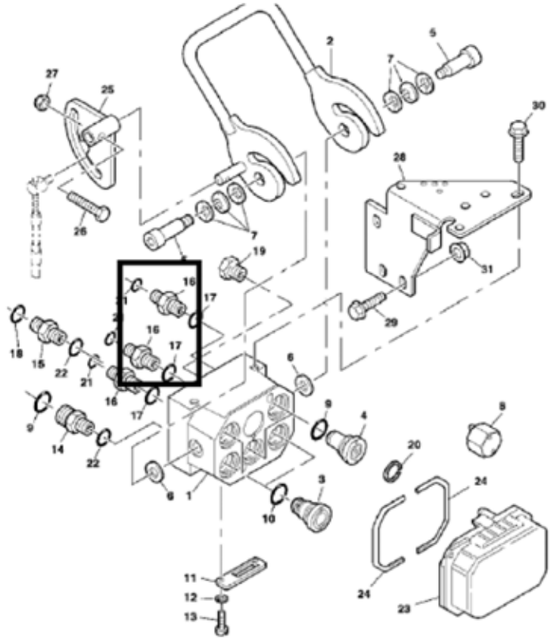
DANGER

For later use of the combine harvester with John Deere attachments, always re-use the unchanged original screw connections!

- Check the hydraulic lines for leaks!

1. Disassemble the two hydraulic lines marked in blue (1) and unscrew the screw-in socket (2).
2. Drill open the integrated throttle to 4 mm, remove chips and dirt, then re-insert and tighten (Position 16 of the screw-in sockets in the John Deere replacement parts catalog).
3. Subsequently reconnect the hydraulic lines. Check for leaks!





Position of the screw-in sockets in the John Deere replacement parts catalog

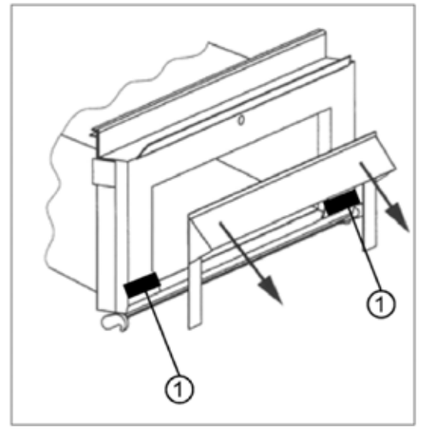
3.6 Connecting the adaption and the hydraulic multi-coupling (New Holland)

Adjusting the combine harvester intake channel (New Holland)

Prior to the initial installation of a header on a CNH combine harvester of the CX and CR series, always detach the brackets (2) on the upper link holding fixture.

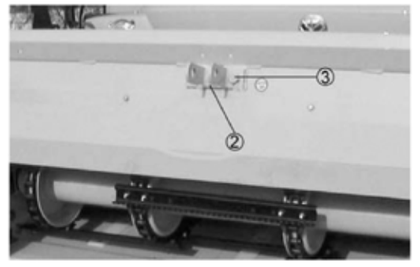
Only remove the brackets, not the entire holding fixture!
The rest of the fixture is required for the pivot point of the angling blade.

1. Remove the channel splash guard from the combine harvester intake channel. If necessary, remove the scraper angle (1).



Remove the channel splash guard, if necessary, remove the scraper angle

2. Remove the brackets (2) on the intake channel. Ensure that the flat steel including screws (3) remains attached to the machine!



Remove bracket (2)

The additional part (550900) is supplied so that the upper link holding fixture can be reused later.

Screw-fit the additional part onto the already installed bracket using longer screws (M16 x 50).

Locking the adaption

DANGER

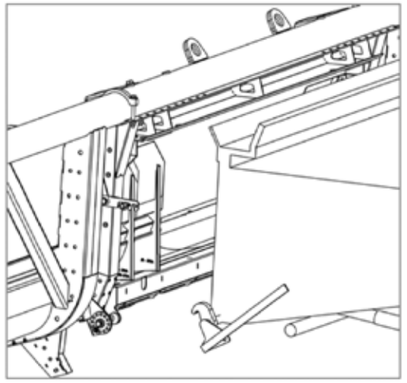
Danger of injury!

- Always activate the lowering protection before working on the header!

1. Ensure that the locking lever on the intake channel is open.

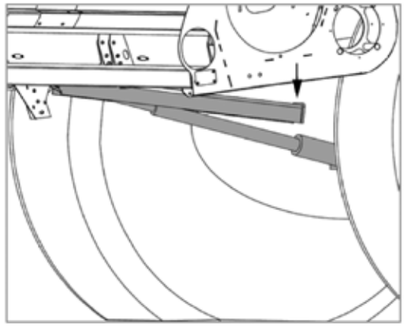
Lock in open position

2. Insert the combine harvester into the header far enough that the lowering protection can be activated. While doing so, ensure that the channel holding fixture is securely hooked in.



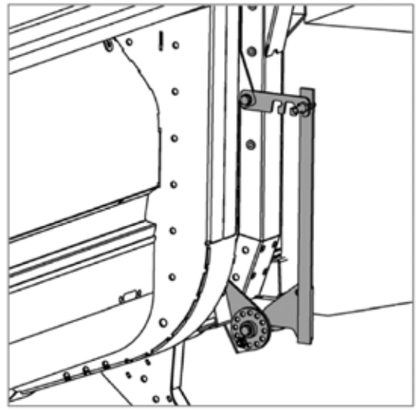
Header prior to mounting

3. Activate lowering protection!



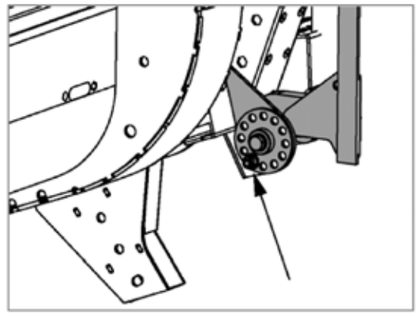
Activated lowering protection

4. Throw the locking lever of the intake channel and securely hook it into the intended section of the header.



Hook in locking lever

5. If necessary, remove the screw of the eccentric connection and set the eccentric shaft so the connection between the locking hook and the header is secure and free of clearance. Subsequently re-secure the eccentric connection by means of a screw.



Active lock with eccentric screw (arrow)

Connecting the hydraulic multi-coupling (New Holland)

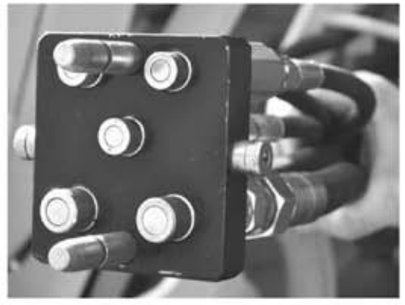
DANGER

- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

On delivery the multi-coupling (plug) is secured on the carrying device of the combine harvester.

Multi-coupling on the combine harvester

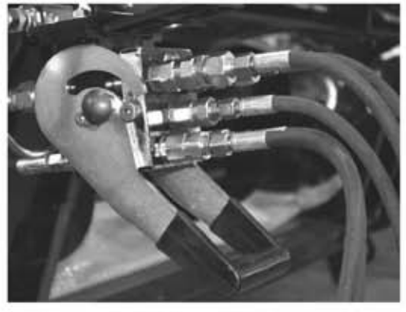
1. Remove the multi-coupling from the carrying device.
2. Ensure that the plug and the coupling are clean.



Remove the multi-coupling

3. Attach multi-coupling to header and throw the lever.

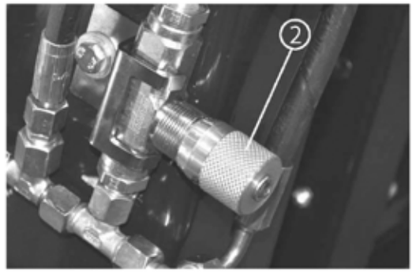
Adhere to the combine harvester manufacturer's specifications!



Multi-coupling on the header

Rotational speed reduction valve (New Holland)

Use the control valve (2) to set the rotational speed of the sweeper and the corn auger thus that sufficient adjustment is possible by using the combine harvester function "Reel fast/slow".



Rotational speed reduction valve New Holland

3.7 Connecting the adaption and the hydraulic multi-coupling (Massey Ferguson)

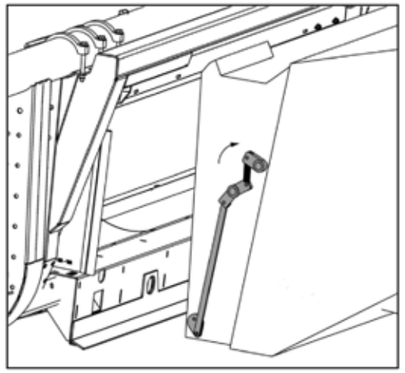
Locking the adaption

DANGER

Danger of injury!

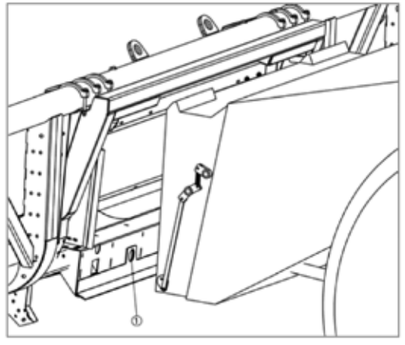
- Always activate the lowering protection before working on the header!

1. Ensure that the locking lever on the intake channel is open.



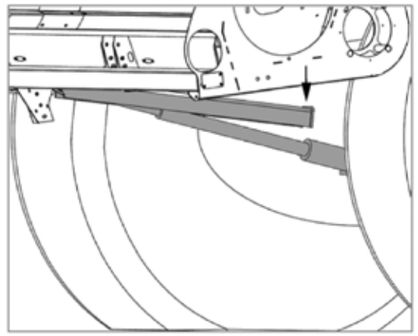
Locking lever in open position

2. Insert the header into the combine harvester far enough that the lowering protection can be activated. While doing so, ensure that the centering pin engages properly in the intended opening (1).



Header prior to mounting

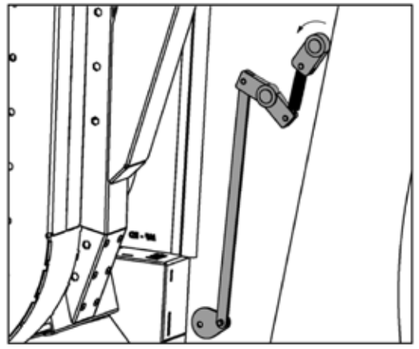
3. Activate lowering protection.



Activated lowering protection

4. Throw the locking lever of the intake channel across the dead center using a suitable tool.

Adhere to the combine harvester manufacturer's regulations!



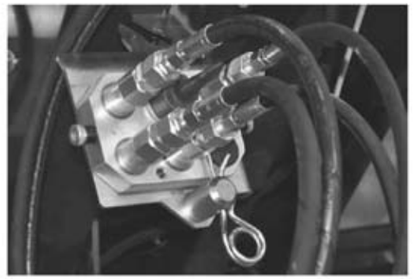
Locking lever in open position

Connecting the hydraulic multi-coupling (Massey Ferguson)

DANGER

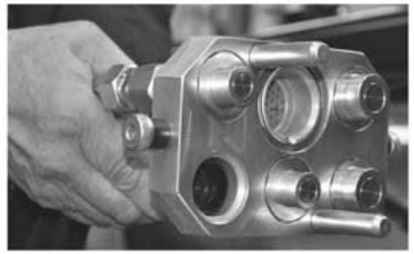
- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

On delivery the multi-coupling (plug) is secured on the carrying device of the header by means of a spring cotter.



Multi-coupling on the header

1. Remove the multi-coupling (plug) from the carrying device.
2. Ensure that the plug and the coupling are clean.



Remove the multi-coupling

3. Attach multi-coupling to combine harvester and completely throw the locking lever.

   Adhere to the combine harvester manufacturer's specifications!

Attach and throw the lever

3.8 Connecting the adaption and the hydraulic multi-coupling (Gleaner)

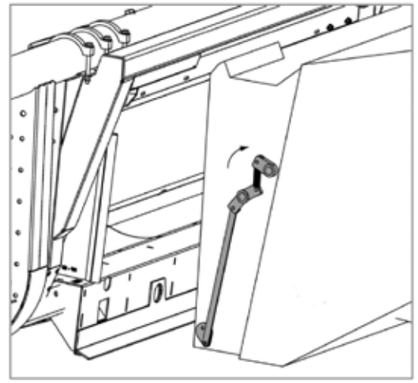
Locking the adaption

DANGER

Danger of injury!

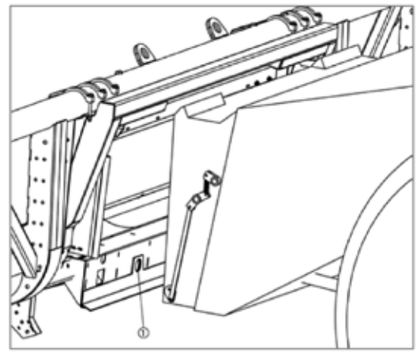
- Always activate the lowering protection before working on the header!

1. Ensure that the locking lever on the intake channel is open.



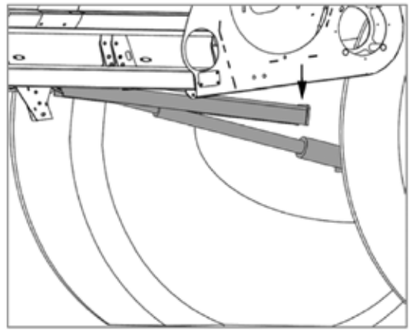
Locking lever in open position

2. Insert the header into the combine harvester far enough that the lowering protection can be activated. While doing so, ensure that the centering pin engages properly in the intended opening (1).



Header prior to mounting

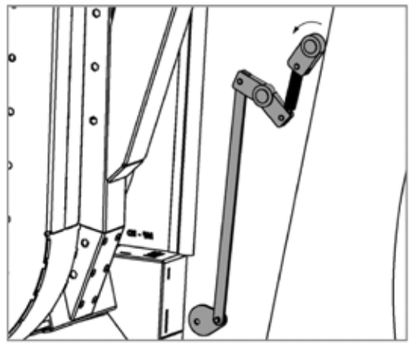
3. Activate lowering protection.



Activated lowering protection

4. Throw the locking lever of the intake channel across the dead center using a suitable tool.

   Adhere to the combine harvester manufacturer's regulations!



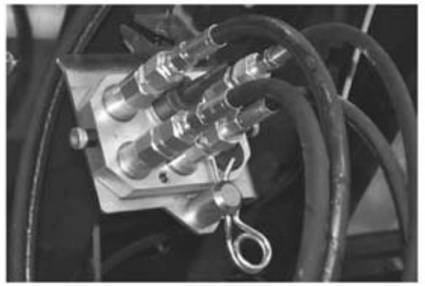
Locking lever in open position

Connecting the hydraulic multi-coupling (Gleaner)

DANGER

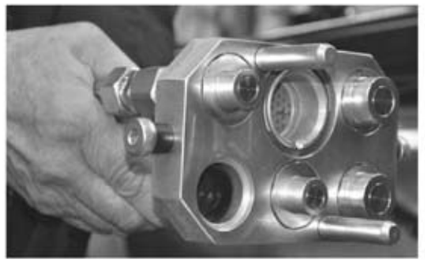
- Only connect the hydraulic lines when the diesel engine is switched off!
- Avoid leakages and protect the environment!
- Ensure that the connection lines are not damaged!

When delivered the multi-coupling (plug) is secured on the carrying device of the header by means of a spring cotter.



Multi-coupling on the header

1. Remove the multi-coupling (plug) from the carrying device.
2. Ensure that the plug and the coupling are clean.



Remove the multi-coupling

3. Attach multi-coupling to combine harvester and completely throw the locking lever.

➲ Adhere to the combine harvester manufacturer's specifications.

Attach and throw the lever

3.9 Assembling the cardan shaft

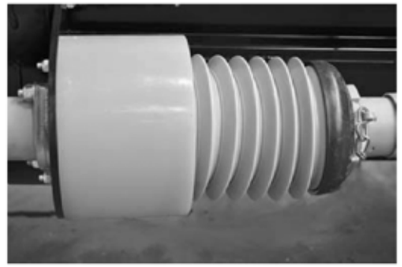
Depending on their type, the corn headers are equipped with different PTO-shaft drives. Usually the drive is located on the RH side, depending on the model, there may be an additional drive on the LH side.

DANGER

Danger of injury!

- Switch off the diesel motor for all work carried out on the machine!
- Secure the PTO-shaft protection devices against turning!
- Check the PTO-shaft protection devices, if necessary, replace immediately!
- Never open or remove protection devices/guards during operation!
- Before connecting the PTO-shaft, read the operating manual supplied by the manufacturer!

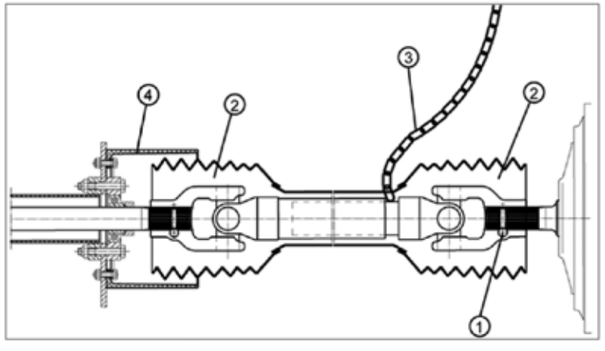
1. Clean and grease the drive shaft prior to connecting it to the PTO-shaft.
2. Fit the PTO-shaft onto the drive shaft until it securely engages (1), see fig. below.
   Ensure that the cardan shaft protection device (2) is undamaged and placed over the connection.
   Ensure that the protection device on the combine harvester side is installed.



PTO-shaft on drive

3. Hook the holding chains (3) into the intended loop to secure against turning.
4. Ensure that the protective cap (4) is undamaged and correctly positioned over the PTO-shaft protection (2).
5. Check for sufficient covering of the PTO-shaft.

Holding chains against turning



1. Locking mechanism, cardan / drive shaft
2. Cardan shaft protection device
3. Holding chain
4. Protective cap

3.10 Installing the monitor

Installing the monitor and the terminal box

DANGER

Ensure that the monitor does not limit the field of vision!

- Attach the monitor so that the field of vision is not limited and the display is easily readable.

1. Attach the monitor in the driver's cab on the RH side above the instrument board by means of the suction holder. Alternative attachment possible.

Monitor with holding fixture

Ensure that the windscreen is free of dust and grease and that the monitor is not attached in the curved section.

2. Install the terminal box at a suitable and easily accessible position in the driver's cab.

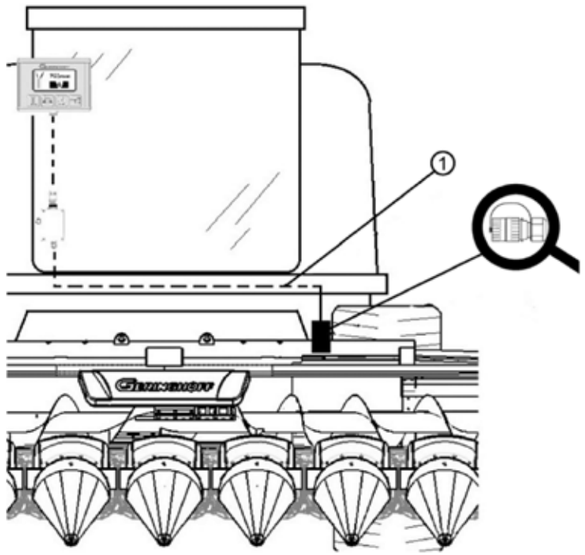
Terminal box

Laying cables

1. Lay the monitor cables to the terminal box without damaging them
2. Lay the header/ terminal box connection cables starting from the LH outside through a suitable opening on the RH side in the cab floor. (If necessary, drill a hole of Ø 13 mm).

Seal the cable exit opening!

Ensure that the cable length is sufficient for the lifting and lowering movements of the intake channel.



1=cable path, magnifying glass=monitor connection to the header

Clamping the cables

Connect according to the figure with the current switched off.

br=brown

gr=gray

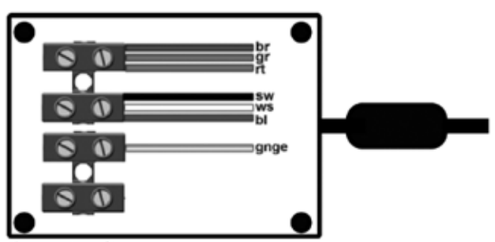
rt=red

sw=black

ws=white

bl=blue

gnge=green-yellow



Connection diagram

Connecting the power supply and the monitor

DANGER

Danger of short-circuit!

1. Connect the plug for the power supply incorporating the ignition lock (12 V, fuse max. 10 Amp.).
2. Securely connect the electrical connection (monitor) with the header.

3.11 Operating the monitor

Switching on the monitor

The monitor automatically switches on as soon as contact is made via the ignition lock.

The system automatically recognizes the attached header type and activates the corresponding buttons. The button LEDs light up briefly, then the display changes to road or harvesting mode (rotational speed display and picking plate position).

If it is not used, the monitor automatically switches itself off after approx. 3 minutes (no input, combine harvester standstill or road transport.)

Press any key to restart the monitor.

Monitor functions

1. Rotational speed
2. Picking plate spacing
3. Activate function "adjust picking plates"
4. Activate "fold" function (optional)
5. Activate "sweeper forward/backward" function (optional)
6. Activate "raise/lower sweeper" function (optional)

During operation the monitor shows the rotational speed of the header in real time. In this way, possibly occurring slippage of the combine harvester drive as well as occurring overload moments can be monitored reliably.

The monitor is used to access the following functions:

- Set picking plate spacing
- Fold up/fold out header
- Position sweeper

3.12 Rotational speed ranges for headers:

North Star: >650 and <850

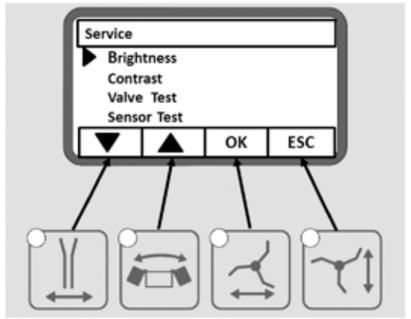
Rota Disc: >650 and <800

Setting contrast and brightness

1. Simultaneously press the "picking plate spacing"  and the "raise/lower sweeper"  buttons for 3 seconds to change over to service mode.

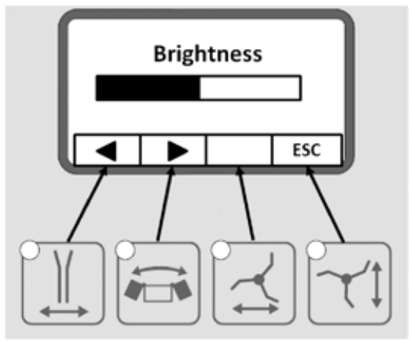
Simultaneously press buttons for 3 seconds

2. First use the arrow buttons [▼] [▲] to select the function (brightness or contrast) and then press the OK button.



Service mode

3. Use the arrow buttons [◄] [►] to adjust the selected function. Use the ESC button to return to the main menu.



Set the brightness

Moving the header to its harvesting position

DANGER

Danger of injury!

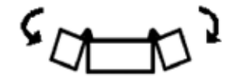
- Never initiate the folding process while the header drive is switched on!
- Never initiate the folding process while driving!
- Ensure that no persons are in the swivel range!

Prior to initiating the folding process, ensure that the folding covers are completely open!
If necessary, briefly actuate the hydraulic valve in the direction of the transport position.

Carry out the folding process without interruptions as the function is otherwise canceled and has to be accessed again via the monitor!

1. Press the "fold" button  to change over to the folding mode. The button LED lights up.

➲ First the folding symbol appears on the display.



Folding symbol on the display

2. Move the header to its harvesting position by means of the function "reel forward or backward" on the control lever of the combine harvester.

➲ The unlocking symbol appears on the display until the cover hoods are closed.

Fig. schematic

3. Do not stop actuating the valve until the harvesting position has been fully reached.
For this reason, continue actuating the valve for 10 seconds after the cover hoods are closed (ensure that the center hoods are completely closed!).

➲ As soon as the harvesting position has been fully reached, the monitor display will switch to the standard harvesting mode.

Standard harvesting mode in standstill

Do not stop actuating the valve until 10 seconds after the cover hoods are completely closed!

Moving the header to its transport position

DANGER

Danger of injury!

- Never initiate the folding process while the header drive is switched on!
- Never initiate the folding process while driving!
- Ensure that no persons are in the swivel range

Carry out the folding process without interruptions as the function is otherwise canceled and has to be accessed again via the monitor!

1. Press the "fold" button to change over to the folding mode. The button LED lights up.

➲ First the folding symbol appears on the display.

Folding symbol on the display is continuously shown

2. Move the header to its transport position by means of the function "reel forward/backward" on the control lever of the combine harvester.

Fig. schematic

➲ The unlocking symbol appears on the display.

➲ The lock symbol extinguishes as soon as the unlocking process is finished and the folding process starts.

Setting the picking plate spacing

The picking plate spacing can only be adjusted in the harvesting position!

1. Press the "picking plate spacing" button to switch into the picking plate adjustment mode.

➲ The button LED lights up, the current indicator value for the picking plate spacing appears on the display.

2. Set the spacing of the picking plates by means of the "reel forward/backward" function on the control lever of the combine harvester.

Picking plate adjustment mode

The picking plate spacing is displayed with values between 0-10 (indicator values).

Adjusting the sweeper

The infinitely variable conveyor segments are available as an option and will be referred to as "sweeper" hereinafter. For foldable headers the sweeper is only installed on the non-foldable header rows, for rigid headers it is installed on all rows. The sweeper is automatically moved into the correct position when the folding process is initiated.

The sweeper can only be adjusted in the harvesting position!

Adjusting the sweeper horizontally

1. Press the sweeper forward/backward button to change over to horizontal mode.

➲ The button LED lights up.

2. Horizontally adjust the sweeper by means of the function "reel forward/backward" on the control lever of the combine harvester.

➲ Finish actuating the valve when the desired position is reached.

Adjust the reel horizontally

Adjusting the sweeper vertically

1. Push the "raise/lower sweeper" button to change over to vertical mode.

➲ The button LED lights up.

2. Vertically adjust the sweeper by means of the function "reel forward/backward" on the control lever of the combine harvester.

➲ Finish actuating the valve when the desired position is reached.

Adjust the reel vertically

3.13 Assembling the conveyor segments of the sweeper

DANGER

Danger of crushing!

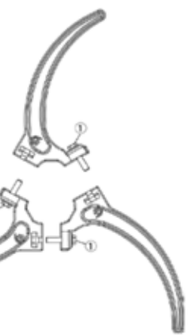
- Only install the conveyor segments of the sweeper when the header is lowered!
- Always move the sweeper to its bottom position for road transport!

The chapter "Operating the monitor", see page 42,describes how to operate the sweeper.

Before assembly, ensure that the hydraulic group and the monitor are connected and that the header is lowered.

1. Remove transport securing devices.
2. Switch on monitor and press "raise/lower sweeper" button. Use the "reel forward" button to lift up the sweeper far enough so that the conveyor segments can easily be assembled.
3. Assemble the conveyor segments on the support pipe as depicted. Tighten the surrounding screws (1) evenly in alternation.

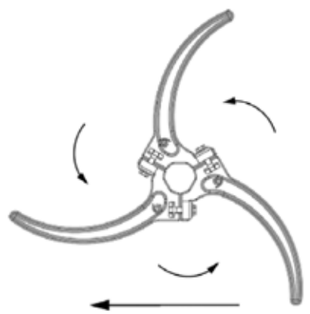
Raise/lower sweeper button



Three-component conveyor segment

Keep a degressive work direction, see figure on the RH side.

Degressively install the conveyor segments on the support and drive pipe. While doing so, center the conveyor segments precisely in relation to the header row.



Degressively installed conveyor segment

For rigid headers, the conveyor segments are installed on all header rows; for foldable headers they are only installed on the non-foldable header rows.
For the harvesting process, set the sweeper (horizontally and vertically) so that the conveying capacity within the header rows is optimal.

Avoid unnecessary strain on the conveyor segments caused by inproper setting!

Rotational speed adjustment of the sweeper and the corn augers

Adjust the rotational speed by means of the "reel rotational speed adjustment" function of the combine harvester.

3.14 Installation and adjustment of the divider points

Attaching the divider points

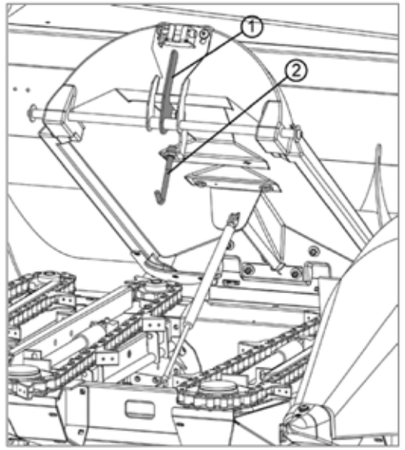
DANGER

Danger of injury!

Covers can spring upwards when opened due to the gas pressure cylinder! When assembling the covers and divider points, body parts can be crushed.

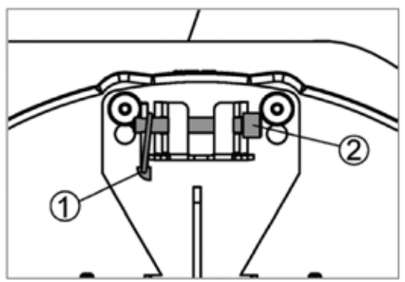
- Only carry out assembly work when the lock and the lowering protection are activated!
- Take special care while working!

1. Throw the lever (1). Press down the cover and unhook the locking hook (2).
2. Carefully swivel the hood upwards.



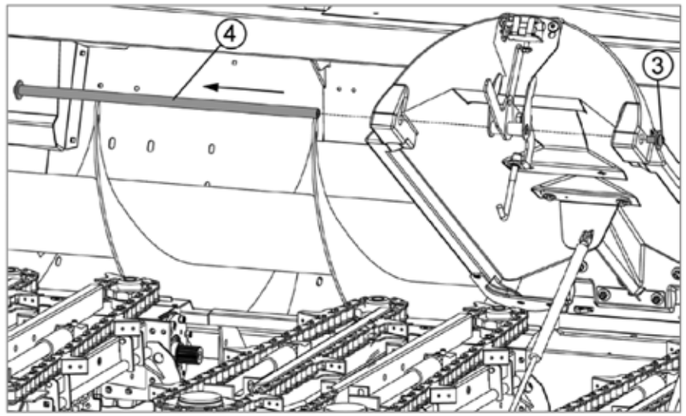
Throw the lever and unhook the locking hook

3. Remove the linchpin (1) and pull out the bolt (2).



Remove linchpin (1), pull out bolt (2)

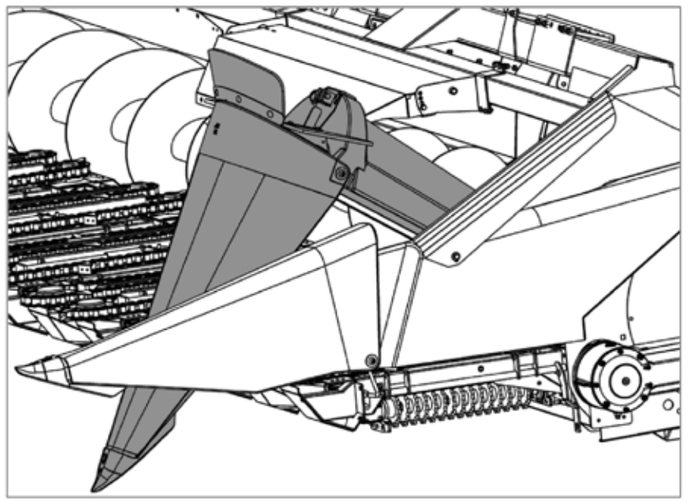
4. Undo the screw (3) on one side, hold the locking lever, and pull out the pipe (4).



Undo screw (3) and pull out pipe

Lower the machine until the divider points are easy to install.
Activate the lowering protection, if necessary use an alternative protective device.

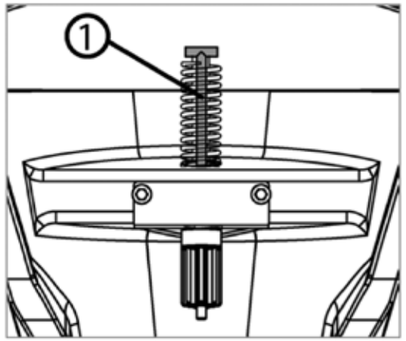
5. Raise the divider point as depicted and insert the pipe in the intended opening of the cover and the divider point. Subsequently screw-fit and secure the screw with a screw adhesive. For the required torque (Nm), refer to the torque table in the appendix.



Insert the pipe while the divider point is hanging

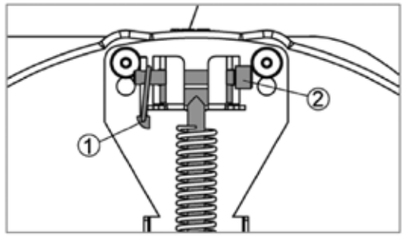
Release pressure from the pressure spring of the setting spindle until the spindle can be hooked in.

6. Hook the setting spindle (1) of the divider point into the intended loop of the cover.



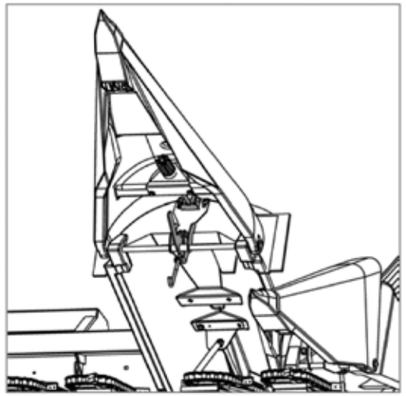
Hook in setting spindle

7. Install safety bolt and secure with linchpin.



Install and secure bolt

8. Close cover. Ensure that the locking hook is simultaneously hooked in.
9. Close the locking lever with moderate pre-tension. If necessary, adjust by turning the hook in or out.



Lock and close

Installing the outer divider point

The assembly of the outer divider points is carried out following the same procedure as the assembly of the center divider points.

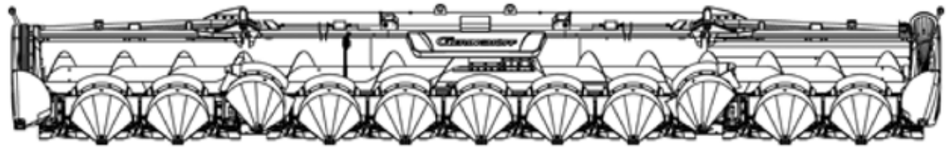
Attaching the divider points on the folding covers

DANGER

Danger of injury!

- Never initiate the folding process while the drive is switched on!
- Never initiate the folding process while driving!

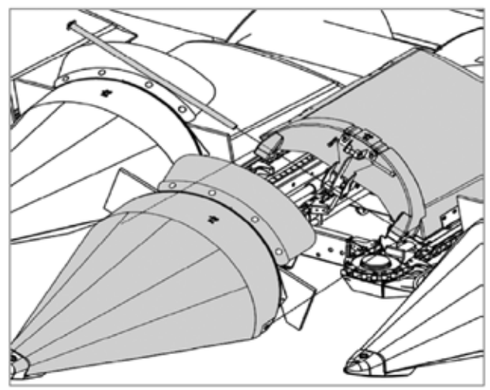
1. Press the "fold" button to change over to the folding mode.
2. Hold the button until the folding covers are open. Interrupt the command as soon as the folding covers are open.
3. Switch off the ignition lock



Fold until covers are open

Always keep the header in its harvesting position!

4. Fit the divider points to the center covers analogous to the assembly of the divider points.
5. After assembling the divider points, switch on the monitor again and select the "fold" command .
6. Move the header to its harvesting or transport position.



Folding covers in open position

Adjusting the divider points

DANGER

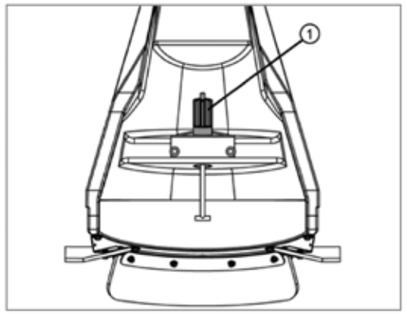
Danger of injury!

- Always activate lowering protection!

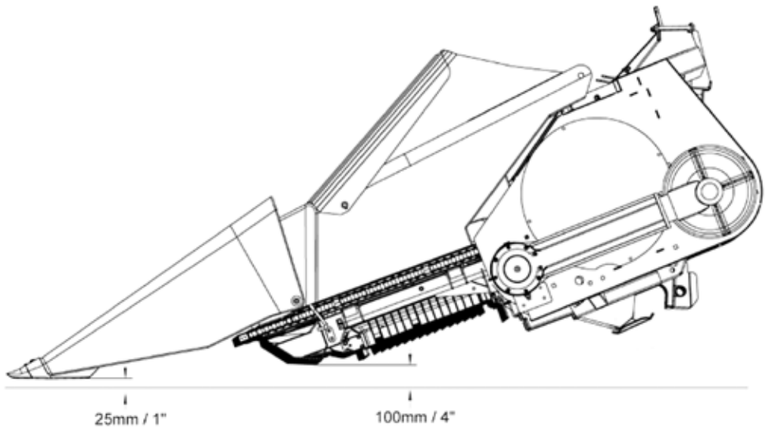
Avoid contact between the divider points and the intake chains!

If the combine harvester significantly sinks into the field, raise the points further.
For lodged corn harvest, lower the points further.

1. First deactivate the lowering protection.
2. Lower the header to a distance of approx. 10 cm from the ground on an even ground.
3. Set the screw (1) so that the divider points are approx. 2 cm from the ground (standard setting).
4. Lift the machine, activate the lowering protection and align the remaining divider points with the outer points.



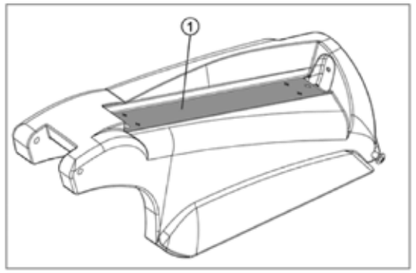
Set a distance of 2 cm from the ground by means of the screw



We recommend setting the two outer divider points approx. 50 mm (2 inches) higher.

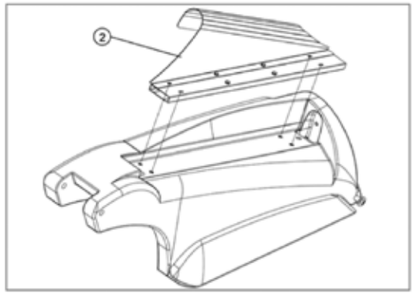
3.15 Assembling the body raiser

1. Remove the screws of the rectangular pipe (1).



Rectangular pipe on body

2. Fasten the body raiser (2) according to the figure using 4 screws on the inside (M8 x 16) and 4 screws on the outside (M8 x 40).



Assembling the body raiser

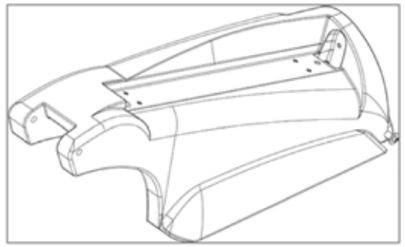
3.16 Assembling the corn auger (optional)

DANGER

Danger of injury!

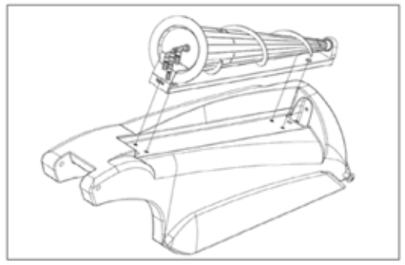
- Only assemble the corn auger when the diesel engine is switched off.

1. Undo the screws of the rectangular pipe and remove the rectangular pipe.



Remove the rectangular pipe from the body

2. Fit the corn auger to the body and fasten with 2 screws on top (M8 x 45) and 2 screws on the bottom (M8 x 40).

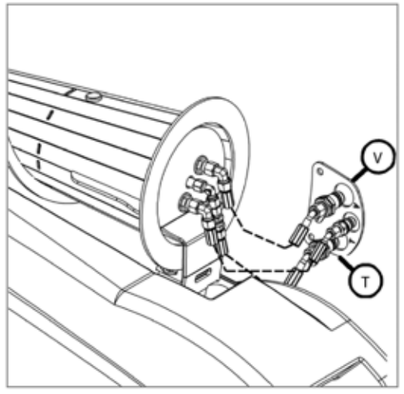


Assemble the corn auger with the rectangular pipe

Connecting the hydraulic connections

The corn auger has 3 hydraulic connections on the LH side and 2 hydraulic connections on the RH side.

3. Connect according to the markings: V=supply line, T=tank (return line). If corn augers are installed on both sides, there is an additional leakage connection (without a marking) on the LH side.



V=supply line, T=return line, center=leakage

Rotational speed adjustment of the corn auger

The rotational speed is adjusted by means of the combine harvester function "reel rotational speed adjustment".

3.17 Operating the sweeper and the corn auger simultaneously

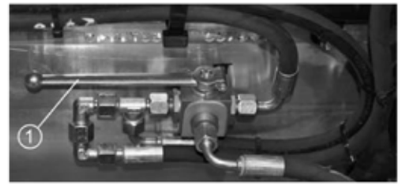
DANGER

Danger of injury!

- Only toggle between the sweeper and the corn auger when the machine is in standstill!

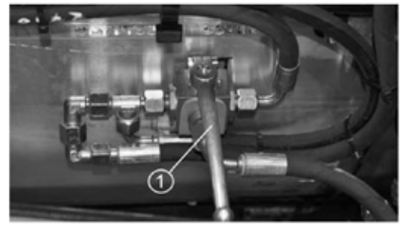
When using the corn auger and the sweeper simultaneously, it is possible to switch off the sweeper and only use the corn auger.

1. Either turn the sweeper on or off by positioning the lever (1) as depicted.



Lever position as an example

➲ The respective on and off positions depend on the model and can deviate from the figures.



Lever position as an example

3.18 Assembling the covers

Assembling/disassembling the exterior covers

DANGER

Gas pressure!

Covers can spring upwards when opened due to the gas pressure cylinder!

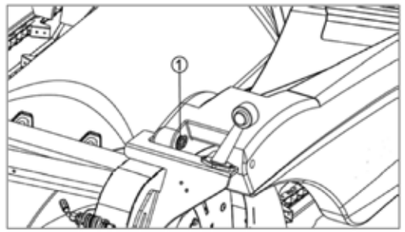
Danger of crushing!

When assembling the covers and divider points, body parts can be crushed.

- Take special care while working!
- Only carry out assembly work when the lowering protection is activated!

1. Remove the linchpin (1).
2. Open the exterior cover.
3. Remove the spring clip on the gas pressure cylinder and tilt the cylinder backwards.
4. Pull off the cover to the side and lay aside.

➲ The assembly procedure is the same as above.



Linchpin on the exterior cover

Section 5 - Rota Disc Elite & NorthStar Elite Supplemental Updates

Disassembling/assembling center hoods

The hoods and divider points are easy to disassemble without tools for cleaning and maintenance work.

DANGER

Gas pressure!

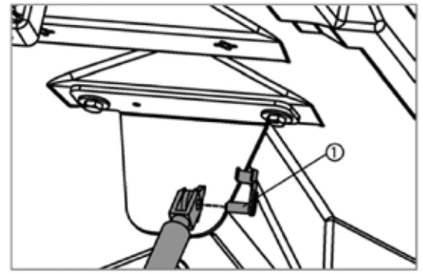
Covers can spring upwards when opened due to the gas pressure cylinder!

Danger of crushing!

When assembling the covers and divider points, body parts can be crushed.

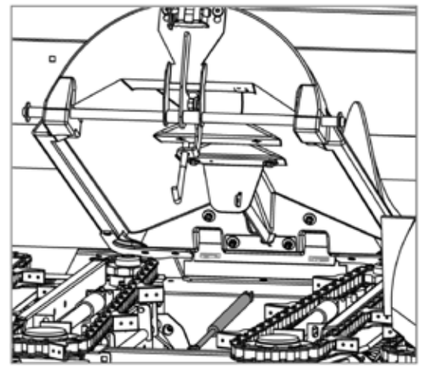
- Take special care while working!
- Only carry out assembly work when the lowering protection is activated!

1. Open the center hood and lift it.
2. While doing so remove the spring clip with the bolt (1) on the gas pressure cylinder.



Spring clip with bolt

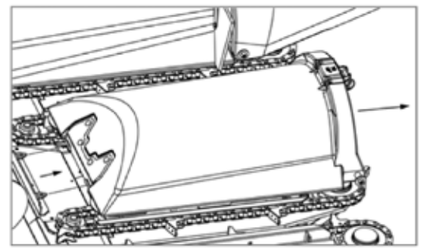
3. Tilt the gas pressure cylinder backwards.



Tilt the gas pressure cylinder backwards

4. Manually lower the hood far enough so that it can be pulled off and removed from the front.

➲ The assembly procedure is the same as above.



Pull off the cover towards the front

Section 5

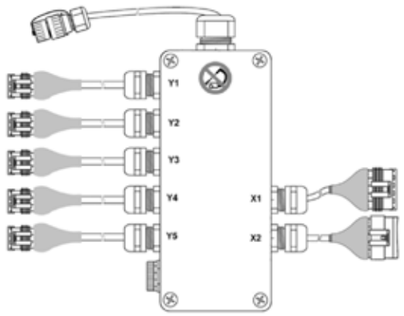
4 Operation

4.1 Troubleshooting

Carrying out a valve test

Valve functions

Y1	Picking plate adjustment
Y2	Folding function (optional)
Y3	Locking (optional)
Y4	Sweeper forward/backward (optional)
Y5	Raise/lower sweeper (optional)

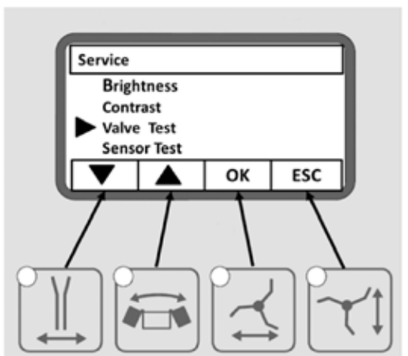


Wiring depends on model

1. Simultaneously press the "picking plate spacing" and the "raise/lower sweeper" buttons for 3 seconds to change over to the service mode.

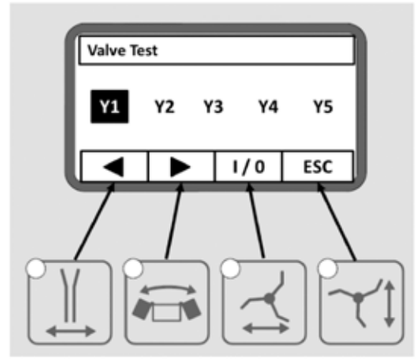
Simultaneously press buttons for 3 seconds

2. Use the arrow buttons ▼ ▲ to select the valve test function and confirm by pressing the OK button. (Setting of brightness and contrast,



Select valve test function

3. Use the arrow buttons ◀ ▶ to select the valve to be activated and subsequently press the I/0 button to activate the valve.



Select valve

➲ The selected valve is shown with a black background. If the electrical connection is correct, the LED on the valve will light up, otherwise carry out troubleshooting. Press the I/0 button again to switch off the valve.

4. Press the ESC button to return to the service mode. Press the ESC button again to return to the main menu.

Valve with LED

Carrying out a sensor test

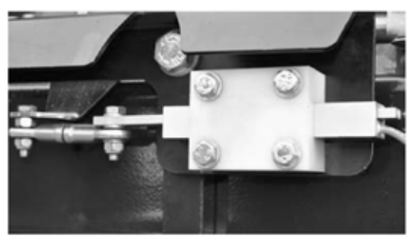
2-3 mm spacing between the sensors and the signal transmitter!

Sensor functions

E1 = rotational speed

Sensor (E1) for rotational speed monitoring below the machine

E2 = picking plate spacing

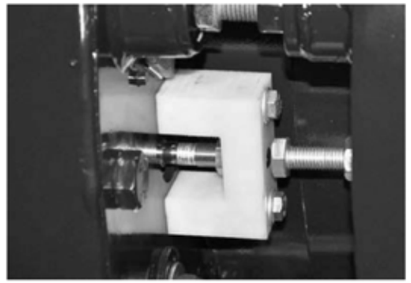


Sensor (E2)for picking plate spacing below the machine

E3 = folding function (optional)

LED on sensor lights up in case of activity.

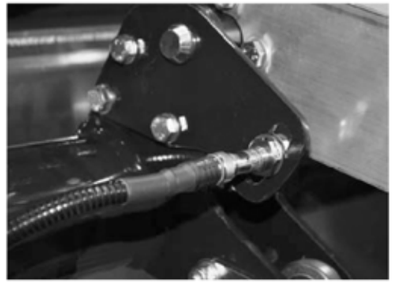
The two sensors for the folding function are serially connected. When testing first make contact on the LH side, then test the RH side.



Sensors (E3) for folding function, RH and LH side in the back

E4 = bottom sweeper position (optional)

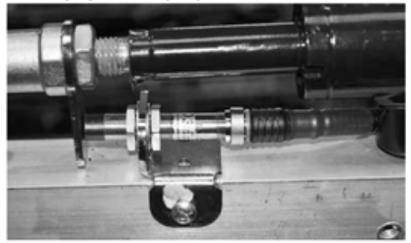
LED on sensor lights up in case of activity.



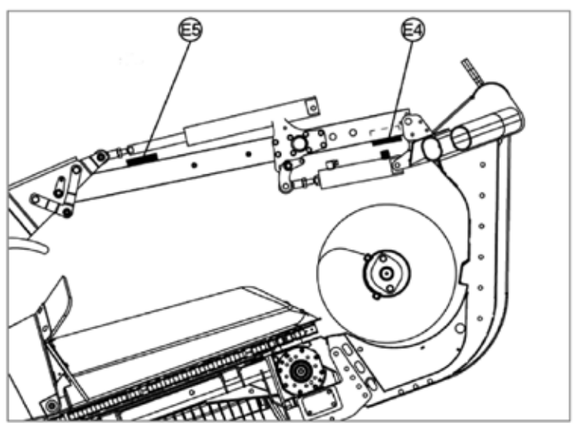
Sensor (E4) for sweeper position, backward

E5 = sweeper position backward (optional)

LED on sensor lights up in case of activity.



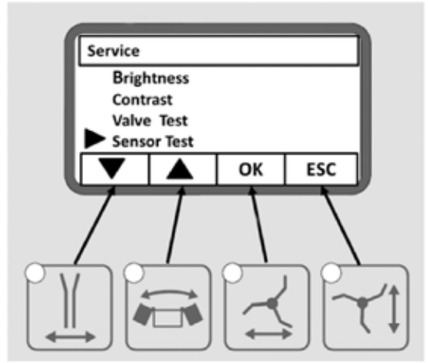
Sensor (E5)



E4 = Sensor sweeper position, bottom, E 5 = sweeper position, backward

E6 = Sweeper detection (determined by wiring)

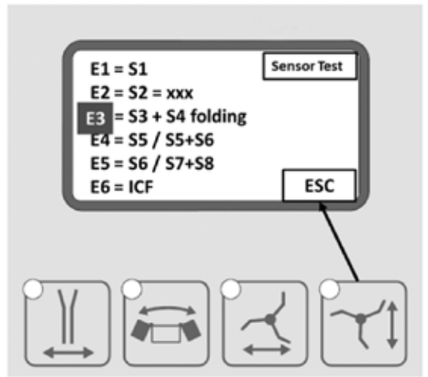
1. Use the arrow buttons [▼] [▲] in service mode to select the sensor test function and then press the OK button.



Select sensor test function

➲ The active input is displayed with a black background.

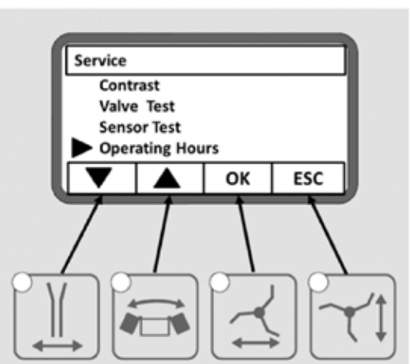
2. Test further sensors by making contact between the sensor and a suitable metal part. If the sensor is active, the LED will light up.
3. Use the ESC button to return to the main menu.



Active sensor is displayed

Displaying the operating hours

1. Use the arrow buttons [▼] [▲] to select the "operating hours" function in service mode and then press the OK button.



Select the operating hours function

➲ The operating hours are displayed

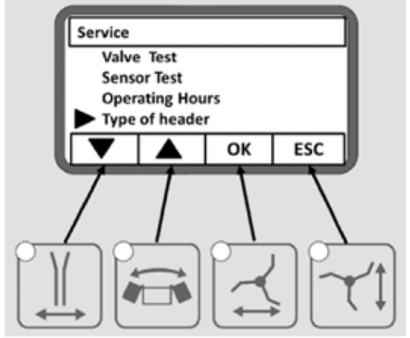
2. Use the ESC button to return to the main menu.

Operating hours display (as an example)

Selecting the header type

The ideal rotational speed range is different for the individual headers (corn or sun flower harvest). Select the connected header model prior to commissioning/start-up so that a warning signal can be given if the rotational speed deviates. If the rotational speed is outside of the determined range, the rotational speed display flashes.

1. Use the arrow buttons [▼] [▲] in the service mode to pick the "type of header" function
2. Subsequently press the [▼] button for approximately 3 seconds.

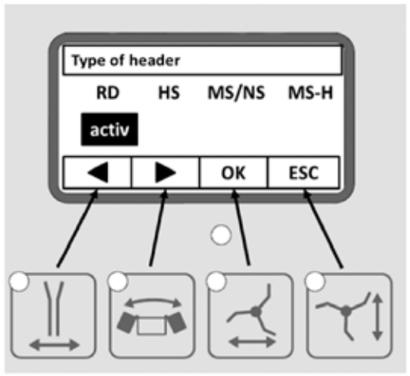


Select the type of header function

3. Use the arrow buttons [◀] [▶] to select the respective header model and confirm by pressing the OK button.

➲ The selected header model is displayed as "active".

4. Use the ESC button to return to the main menu.



Header type selection (as an example)

4.2 Readjusting the basic setting of the picking plates

DANGER

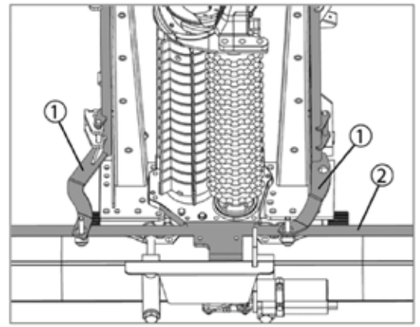
Danger of injury!

- Only adjust the picking plates when the diesel engine is switched off.
- Only adjust the picking plates when they are lowered!

Readjusting the picking plates may become necessary due to regional variations in corn types or the effects of foreign objects.

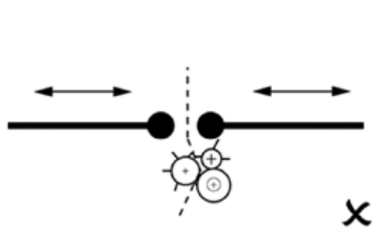
Adjust the basic setting of the picking plates on both sides by means of the levers (1).

1. Hydraulically move the picking plates to their most narrow position.
2. Slide the lever to the RH side on the round pipe (2) = picking plate opens.
3. Slide the lever to the LH side on the round pipe (2) = picking plate closes.

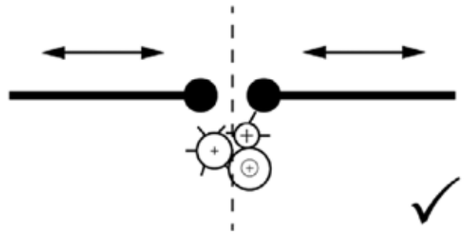


Picking plate spacing adjustable on both sides

Always center the gap above the picking plates! Ensure that the picking plate spacing and the centering are identical for all picking plates. If necessary use suitable tools. Ensure that the picking plate spacing on the gear side is set to at least 3 mm more than on the intake side (conically opened to the back).



Picking plate gap not centered



Picking plate gap centered

4.3 Adjusting the auger cover

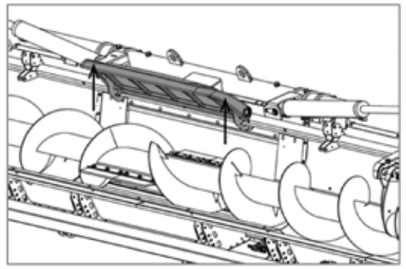
DANGER

Danger of injury!

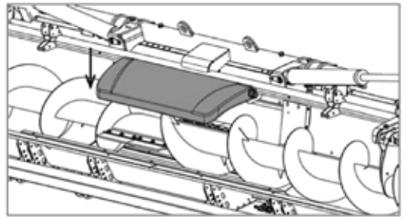
- Only adjust the auger cover when the diesel engine is switched off!

The auger cover adjustment is infinitely variable and the cover can therefore be adjusted to individual requirements.

1. Manually adjust the auger cover upward or downward until the desired position is reached.



Open auger cover



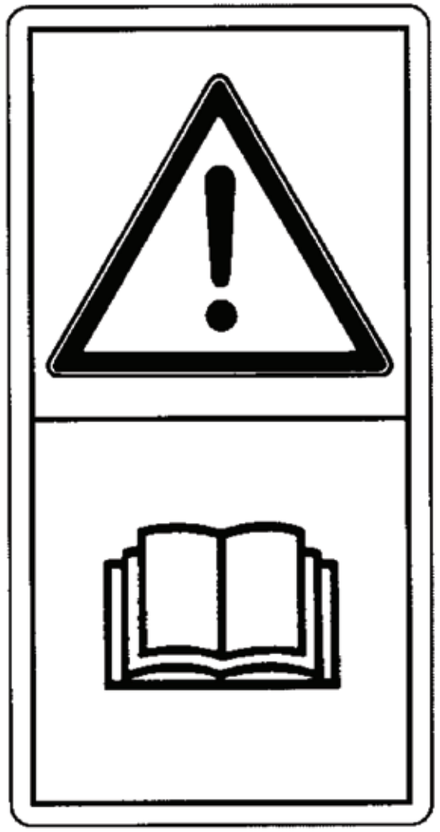
Completely closed auger cover

Section 6 - Brand Specific Suggestions

Case IH 135
New Holland 135
Gleaner N through R series 135
Lexion 135
John Deere 136

To prevent accidents, strictly follow these operating instructions and WARNINGS on the machine.

- Before starting the machine, CHECK for operational dependability and traffic safety!
- In addition to these operating instructions, also follow the current safety instructions.
- The warning signs and labels give important notes for the safe operation of the machine, thus serving the health and well-being of yourself as well as others.
- Prior to operating the machine make yourself familiar with all operating elements, safety procedures and functions. Ensure that all who will operate or come into close vicinity of the machine also have this knowledge.
- Check the driving characteristics, steering and braking behavior of any vehicle that will make use of or tow this machine.
- Load rating of the tires is to be checked and sufficient load capacity ensured.
- Sufficient hydraulic lifting power and stability of the lines are to be ensured.
- When working on the machine the provided supporting devices must be used.
- Admissible axle loads and total weight must consistently be observed.
- Before start-up all guards and maintenance holes must be in position and closed.
- While the machine is running be respectful of dangerous areas and adhere to warning labels at all times.
- Maintenance and repair work is to be performed only with engines shut down and drive lines disengaged.
- On public roads the legal provisions must be observed.
- If required, additional headlights for the road transport must be mounted (see local road transport licensing regulations).
- The instructions of the combine manufacturer must be observed as they pertain to operation of headers.
- The transport and operation of all machines including customized ones is made at your own risk.



CAUTION

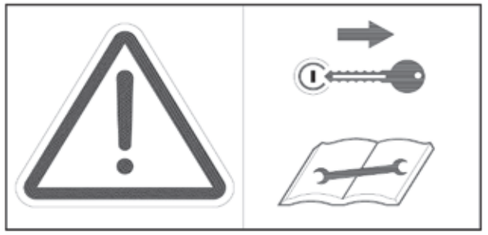
- The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.
- Protect yourself.

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

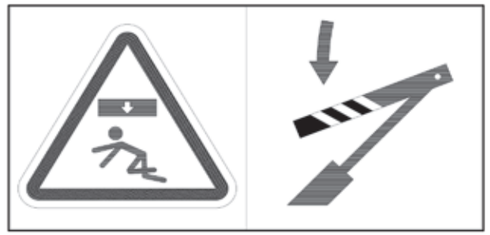
You may need:

- A hard hat.
- Protective shoes with slip resistant soles.
- Protective glasses or goggles.
- Heavy gloves.
- Wet weather gear.
- Respirator or filter mask.
- Hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs or ear plugs protects against objectionable or loud noises.
- Provide a first-aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine.
- Be sure the extinguisher is properly maintained and be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.
- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.
- Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.
- Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.
- Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.
- Keep machinery clean. Straw and chaff on a hot engine are a fire hazard. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.
- Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.

ISO 11684

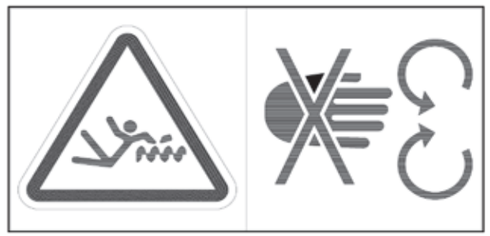


Prior to performing maintenance and repair work, turn off the motor and withdraw the key.

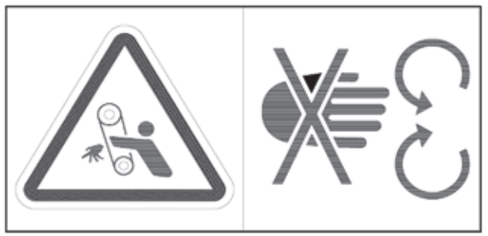


Insert lifting cylinder safety latches before entering dangerous areas.

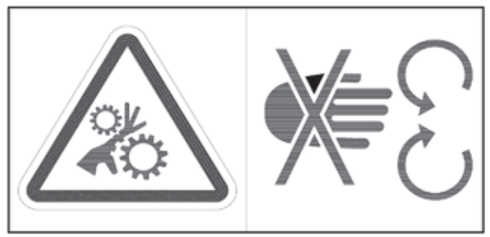
Keep away from danger zones between the header and machine!



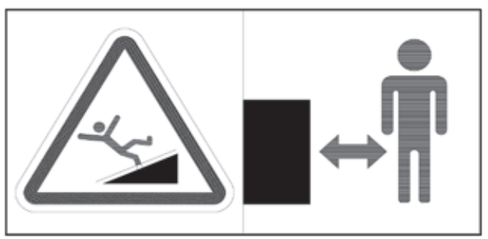
Keep clear of operating machinery.



While the motor is running, never allow guards to be removed.



While the machine is in operation, keep away from moving components.



Keep a sufficient safety distance to the header. Prior to maintenance works or clearing of clogged header, switch off motor and remove key. Keep clear of machine during operation to avoid flying debris.

Never go into the operational range of the machine.

Case IH

- 1400 – 1600 and some of the 2100 series have a pressed steel pulley on the jackshaft. They should have a cast iron pulley on the jackshaft.
- Case has a kit that includes the cast pulley, shaft, bearings and hardware but it is expensive, and a lot of the customers have switched to the cast iron pulleys. You should make the customer aware of this.
- If the customer has belt slippage on the jack drive belt, Geringhoff has a tightener pulley that will give more wrap around the jack shaft pulley and reduce slippage.
- On 1999 and older units without the four groove belt that runs the jack shaft, a three groove kevlar belt is available at the Case IH dealership.
- On 2300 and 2500 series combines, 2000 and newer models already have the four groove belt on the jackshaft pulley and no additional parts are needed.
- AFX 8010 – 7010 with 12, 16, and 18 row heads a third cylinder may be necessary.
- AFX 8010 – 7010 use a 37 tooth crown gear and a 16 tooth auger drive sprocket.
- AFX 8010 – 7010 If the computer system hasn't been changed on a 2003, 2004, or 2005 year model, on a rigid head you might have to change the deck plate hose from the reel lift to the reel fore and aft. On a folding head leave the hoses where they are and fool the combine (for example folding draper table).
- Case IH 8010 and 7010 fold well and don't need anything done to improve.
- 8010 – 7010 have a new monitor for '07 and a newer version for '08. This is nice because it can be programmed for folding and hydraulic deck plates. However, the functions will work opposite of what we are used too:
    - The fold will operate on the reel lift.
    - The deck plates will work on the fore & aft.
- If you are running a rigid head, set the monitor on hydraulic deck plates then move the hose on the single point adaptor down from the middle spot to the bottom spot. The deck plates will work on the fore & aft button on the combine.
- On some 8010's we have noticed that we cannot flatten the heads for some crops (sunflowers). We have added a spacer between the mounting plate and the feeder house. A 1 inch spacer = 2 ½ degrees.

New Holland

- Direct drive is available through New Holland for all TR series combines and is recommended on RD 8 row and up.
- On a 940, 960, and 970 a direct drive is available through New Holland, and is recommended on RD 12 rows and up.
- On late model 07 CR combines the monitor will be the same as an 8010, and can be set up the same.
- If you are running a early '07 or older CR combine, when you set the monitor to corn head all hydraulic oil is shut off to reel lift and fore & aft ports on the single point hook up. To get the deck plates to work, you move the deck plate hose up to the reel speed port on the single point hook up. Use the +/- button for reel speed to open and close the deck plates.

Gleaner N through R Series

- Feederhouse is offset to the right. 830 rigid and folding corn head has an offset auger. Folding 8 row need this auger to work properly.
- Deck plates - We recommend an additional hydraulic valve be put on the valve stack on the right hand side for combines 2009 and older (high pressure side). Type L or F2 or up, you can add Agco book part # 71395046 wiring harness to hook up the switch in the cab. Reel fore and aft is electrical.
- Folding corn heads also require an additional valve installed on the high pressure side.
- The A75 and A85 are the same combines as the Massey Ferguson 9895 and the Challenger 660, 670, 680.
- The hydraulic block that is now used is available through Geringhoff.
- The S Series is the same as the R Series.

Lexion

- With a variable speed feederhouse, use 37 tooth crown gear and a 16 tooth auger sprocket.
- With a direct drive feederhouse, use a 32 tooth crown gear and a 13 tooth auger sprocket.
- 400 series and 500 series hydraulic block is different and must order a 400 or 500 hydraulic block from Geringhoff.
- 590 series does have a direct drive available. In 2006 it was field installed.

- Folding heads may be wired in with an extra switch installed in the cab to solenoids three and four on the hydraulic block, or may have to be changed to solenoids five and six.

John Deere

- 2011 combines had a running change on the top feederhouse lift arms. The new arms are wider and require new Geringhoff top mounts for all JD 2011 and newer combines part # 553490 and 5553491.

- 9600 - 9500 , 9650 – 9750 STS , 9650 Walker, 9660 – 9760 STS Prior to 2006 we recommend direct drive when using a 12 row RD and up, with a 47 tooth Crown gear and a 19 tooth auger sprocket.

- 9650 or a 9660 prior to 2006 that have the standard or HD variable drive can run an 8 row RD. However, you need to check a few things on the combine, and let the owner know the following:

    - They will only be able to run @ 4 to 4.5 mph.
    - The reverser should be checked over to ensure it is working properly and in good condition.
    - Oil cooler has been installed.
    - Check belts for excessive wear
    - Belts are adjusted properly:
        - 1/4 to 1/8 inch on front sheaves.
        - Middle adjustor not over 3/4 inch up.
        - Back pulley is adjusted out to ensure proper tension.

- Even with everything in good repair the owner might experience variable drive running warm or the speed of the head bouncing during operation.

- Difference at a glance between the High Torque and the Heavy Duty variable drive.

- High Torque has a gold or silver hex nut set in front sheave and a larger pulley on reverser (15” + or -). Larger belt 1 ¾ wide.

- Heavy Duty has a smaller pulley on the reverser (12” + or -) and smaller belt, about 1 inch.

- When using an RD 830 let the customer and dealer know about the direct drive option.

- 9660, 9760, and 9860 - For 2006 models with the high inertia variable speed torque drive, use a 37 tooth crown gear and a 16 tooth auger sprocket on all models. A direct drive is not available or needed.

- On folding corn heads (all models) with variable speed feederhouse drive, an additional hydraulic valve and switch has to be added to the corn head. This will allow the deck plates to move and the fold to work by only using the reel fore and aft.

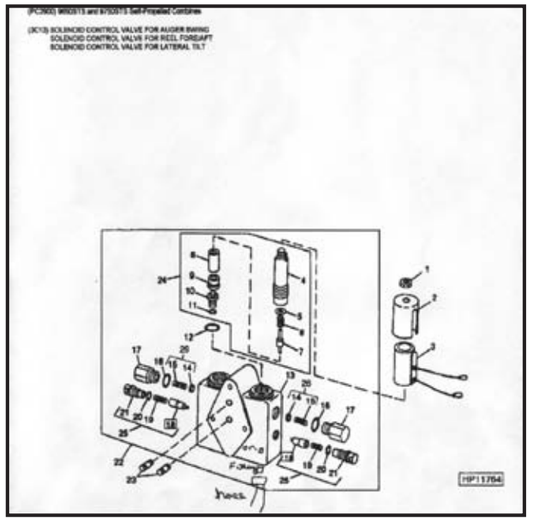
- On 50 series the angle of the head can only be adjusted on the corn head itself.

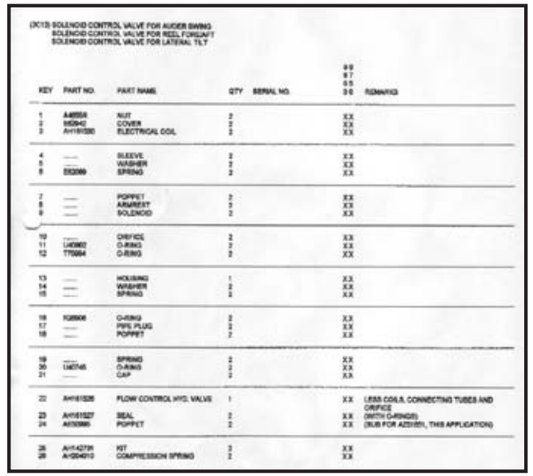
- On a 60 series the angle of the head can be adjusted by adjusting the face plate of the feederhouse on the combine.

- If you have a problem with the folding (folding too slow):

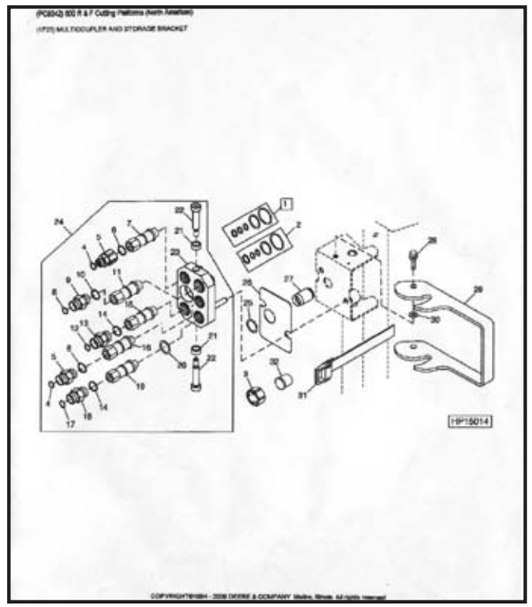
    - On the 50 series you can take an orifice out from behind where the hydraulic hose connects to the valve block. The valve block is located on the left side of the combine behind the grain tank. The valve that you have to remove the orifice from is #11 on the stack. There is a diagram on the left side of the machine above the valves. JD uses the numbers 1, 3, 5, 9, and 11, no seven. Make sure the head is on the ground or it will fall when you release the pressure. Cover hose with a rag to absorb the oil that is released. Remove fitting after hose is off, in the fitting there is a small orifice. Use a 2 or 3 mm allen wrench to remove, and give to the farmer. He may have to reinstall for grain heads. See picture 1 on next page.

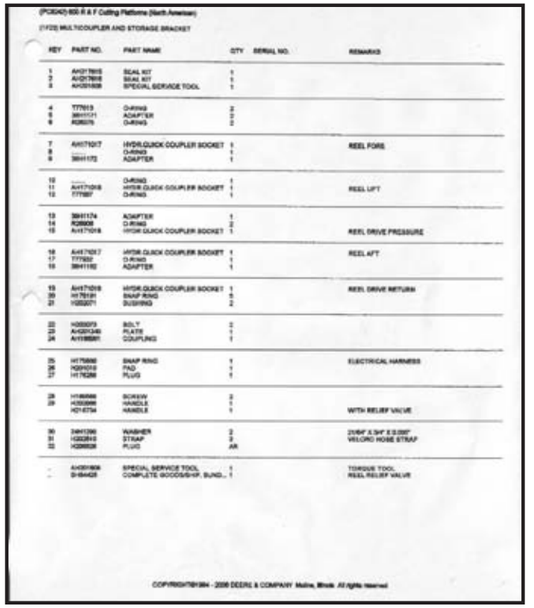
- On a 60 series you can drill out the orifice on the multicoupler. As per picture 2 on next page, it’s the fitting number 5 that you drill out.





Picture 1





Picture 2

Section 6

GERINGHOFF