# 460pro
# 475pro
# 490pro
# Rotary Harvesting Units

## OPERATOR'S MANUAL

### 460pro, 475pro and 490pro Rotary Harvesting Units

**OMKM138531 ISSUE C5 (ENGLISH)**

**Maschinenfabrik Kemper GmbH & Co. KG**

**European Edition**

PRINTED IN U.S.A.

## Foreword

READ THIS OPERATOR'S MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This rotary harvesting unit may be installed and operated on a forage harvester only. The user must be entitled to drive a forage harvester on public roads. This manual and safety signs on your machine are available in other languages. To order, see your KEMPER dealer.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and must remain with the machine when you sell it.

MEASUREMENTS IN THIS MANUAL are given in metric units. The customary U.S. unit equivalents are also quoted. Only use components and bolts that fit. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the implement will travel when going forward.

THE TERM "TRANSPORT" refers to a rotary harvesting unit mounted on a forage harvester and transported from A to B on the forage harvester.

THE TERM "HAULAGE" refers to a rotary harvesting unit loaded on a flatbed carrier and transported from A to B on the flatbed carrier.

LOADING AND HAULAGE of this rotary harvesting unit must be performed only by persons familiar with how the load is secured, and who can provide evidence of this.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Record all numbers exactly. In the event of theft, these numbers may prove vital in tracing your property. Your KEMPER dealer needs these numbers when you order parts. File the identification numbers in a secure place away from machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection.

INTENDED USE: THIS ROTARY HARVESTING UNIT may be used ONLY for harvesting:

- thick-stemmed, flexible types of plant such as corn, elephant grass or bamboo
- thin-stemmed types of plant such as grain crop, mustard

Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user.

THIS ROTARY HARVESTING UNIT MUST NOT be used to manually transfer materials of any sort and is not suitable for the transfer and chopping of:

- woody plants with a diameter greater than 1 mm
- wood intended for chipping
- animal feed such as beets
- metallic objects
- materials that include stones

Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the INTENDED USE.

THIS ROTARY HARVESTING UNIT MUST be serviced and repaired ONLY by industrial mechanics, fitters or persons with comparable qualifications. The electrical system must be repaired only by electricians. The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. It is not permitted to alter the machine to accept materials other than those permitted in its intended use. Any arbitrary modifications carried out on this rotary harvesting unit will relieve the manufacturer of all liability for any resulting damage or injury.

THIS ROTARY HARVESTING UNIT MAY NOT be used in USA and Canada.

km00321,1682082213009 -19-07SEP23-1/1

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*Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.*

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Zentralfunktionen
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A John Deere ILLUSTRUCTION ™ Manual

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# Predelivery Instructions

## Predelivery Check List

The following predelivery service must be performed by the dealer. Check off each item as it is completed. Refer to the appropriate operator's manual/technical manual for detailed information.

□ Check machine for any shipping damage.

□ Remove the transport pallet.

□ Check that parts delivered separately have been properly installed.

□ Visually check that the paint, decals, and general appearance are good.

□ Visually check for oil or coolant leaks.

□ Visually check the screws and nuts to ensure that they are tightened.

□ Check that all grease fittings have been lubricated.

□ Visually check that the paint, decals, and general appearance are good.

□ Perform final cleaning/touch up of machine for delivery.

□ Perform folding and unfolding test.

□ Perform all calibration with the customer's forage harvester.

□ Perform test run.

**Rotary Harvesting Units for Claas Forage Harvesters Types 498, 499, and 502 Only:**

□ To use the variable header drive on headers with a multi-speed gear case, activate the option as described in Section 30.

□ Rotary harvesting units prepared for the attachment of the support wheel: Perform the wiring harness installation as described in Section 30.

**Signature Dealer/Service Technician** **Date:**

km00321,1734619224603 -19-05MAR25-1/1

## Identification View



KM575588 —UN—10OCT23

*475$^{pro}$ Rotary Harvesting Unit Shown*

km00321,1683020541487 -19-02MAY23-1/1

## Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



T81389 —UN—28JUN13

DX,ALERT -19-03OCT22-1/1

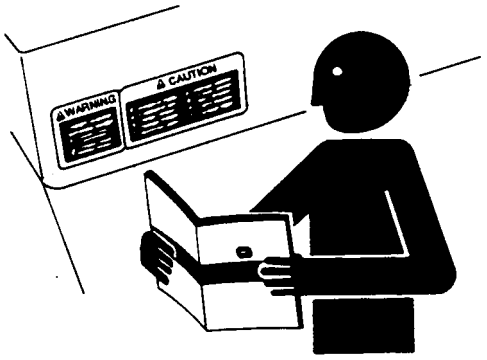
## Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your KEMPER dealer.

Before you start working with the machine, learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your KEMPER dealer.




TS201 —UN—15APR13

km00321,1682082907634 -19-21APR23-1/1

## Understand Signal Words

**DANGER**; The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING**; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION**; The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.




TS187 —19—30SEP88

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL -19-05OCT16-1/1

## Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.



H28930 —UN—30JUN89

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## Operator Ability

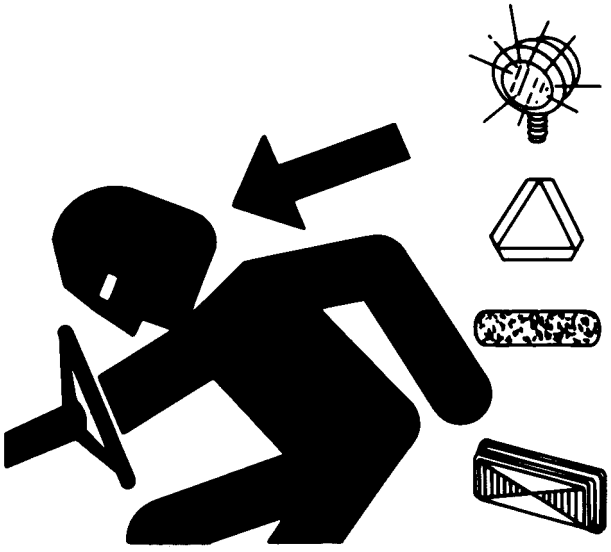
- Machine owners must make sure that operators are responsible, trained, have read the operating instructions and warnings, and know how to operate the machine properly and safely.
- Age, physical ability, and mental capacity can be factors in machine-related injuries. Operators must be mentally and physically capable of accessing the operator station and/or controls, and operating the machine properly and safely.
- Never allow a child or an untrained person to operate the machine. Instruct all operators not to give children a ride on the machine or an attachment.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.

DX,ABILITY -19-07DEC18-1/1

## Use Safety Lights and Devices

Prevent collisions with other road users. Slow moving tractors with implements or drawn equipment, as well as self-propelled machines are especially dangerous on public roads. Always pay attention to traffic approaching from behind, particularly when changing direction. Provide for safe traffic conditions by using turn signals.

Use headlights, hazard warning lights, turn signals and other safety devices according to the local regulations. Keep safety devices in good condition. Replace missing or damaged items.



TS951 —UN—12APR90

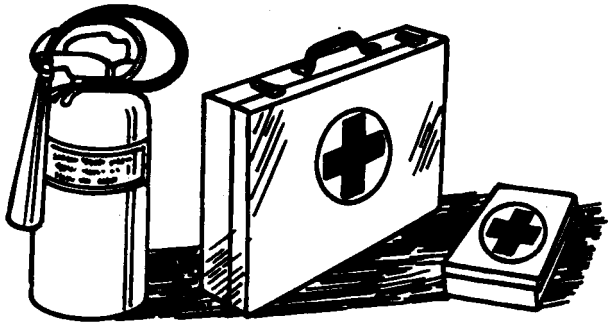
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## Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

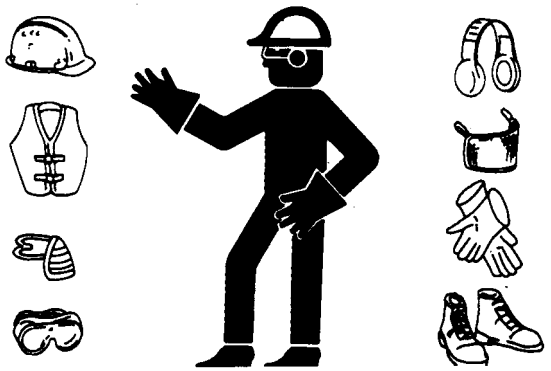
## Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



TS206 —UN—15APR13

DX,WEAR -19-10SEP90-1/1

## Check Machine Safety

Always check the road and general operating safety of the machine before using.

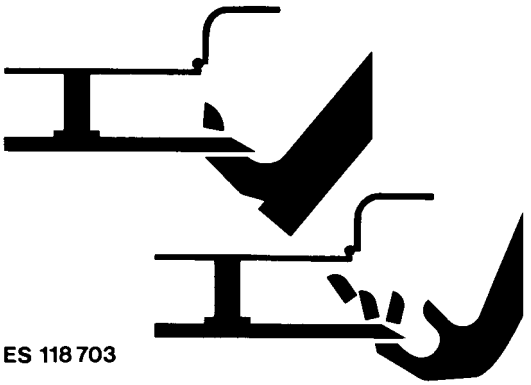
FX,READY -19-28FEB91-1/1

## Guards and Shields

Keep guards and shields in place at all times. Ensure that they are serviceable and installed correctly.

Always disengage main clutch, shut off engine and remove key before removing any guards or shields.

Keep hands, feet and clothing away from moving parts.




ES118703 —UN—21MAR95

FX,DEVICE -19-04DEC90-1/1

## Avoid Entanglement

To avoid entanglement, do not feed crop into machine by hand or foot. Do not attempt to unplug the machine manually while it is running. The feed rolls can feed crop material faster than you can release your grip on the material.



KM575587 —UN—11OCT23

km00321,1682690650276 -19-28APR23-1/1

## Stay Clear of Harvesting Unit

Due to their function, the cutting rotors as well as gathering, cross and feed drums cannot be completely shielded. Stay clear of these moving elements during operation. Always disengage main clutch, shut off engine and remove key before servicing or unclogging harvesting unit.




ES118704 —UN—21MAR95

ZX,CUT688 -19-10FEB98-1/1

## Keep Hands Away From Knives

Never attempt to clear obstructions in front of or on harvesting unit unless main clutch is disengaged, engine shut off and key removed.

Everyone must be clear of the forage harvester before starting the engine.



TS254 —UN—23AUG88

FX,KNIFE -19-21DEC90-1/1

## Store Attachments Safely

Stored attachments such as dual wheels, cage wheels, and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.



TS219 —UN—23AUG88

DX,STORE -19-03MAR93-1/1

## Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing away from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.

Falling while cleaning or working at height can cause serious injury. Use a ladder or platform to easily reach each location. Use sturdy and secure footholds and handholds.



TS218 —UN—23AUG88

DX,SERV -19-28FEB17-1/1

## Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep all shields in place at all times. Make sure rotating shields turn freely.

Wear close-fitting clothing. Stop the engine and be sure that all rotating parts and drivelines are stopped before making adjustments, connections, or performing any type of service on engine or machine driven equipment.



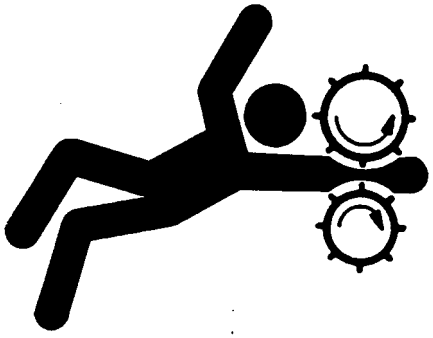
TS1644 —UN—22AUG95

DX,ROTATING -19-18AUG09-1/1

## Service Machines Safely

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



TS228 —UN—23AUG88

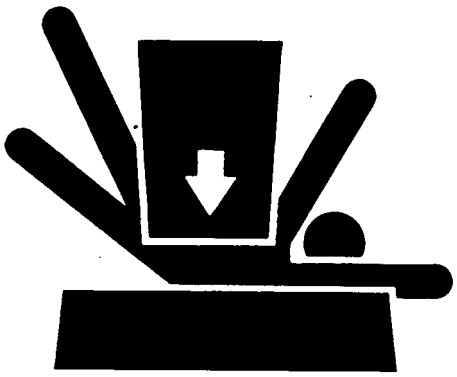
DX,LOOSE -19-04JUN90-1/1

## Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.



TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

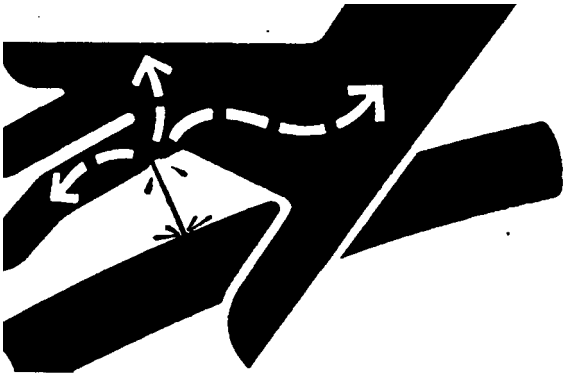
## Avoid High-Pressure Fluids

Escaping oil under pressure can have sufficient pressure to penetrate the skin, causing serious personal injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Check and tighten all connections before applying pressure.

Hydraulic oil escaping from pin-holes is difficult to detect, so use a piece of cardboard to search for leaks. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.

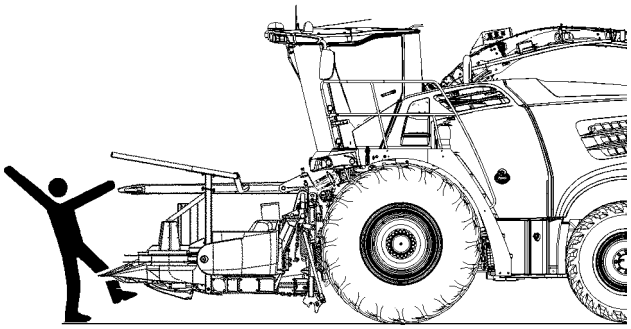


X9811 —UN—23AUG88

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## Driving on Roads with Rotary Harvesting Unit Attached

Before driving the forage harvester on public roads, the rotary harvesting unit must be raised and secured in the raised position. The rotary harvesting unit must not, however, obstruct the operator's view of the road.



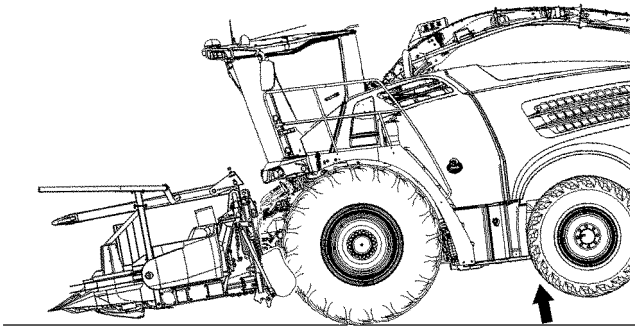
**KM232861**

KM232861 —UN—10FEB15

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## Ballasting for Safe Ground Contact

Operating, steering and braking performance of forage harvester can be considerably affected by attachments which alter the center of gravity of the machine. To maintain safe ground contact, ballast the harvester at the rear end as necessary. Observe the maximum permissible axle loads and total weights.



**KM232862**

KM232862 —UN—10FEB15

KM00321,0000391 -19-10FEB15-1/1

## Remove Paint Before Welding or Heating

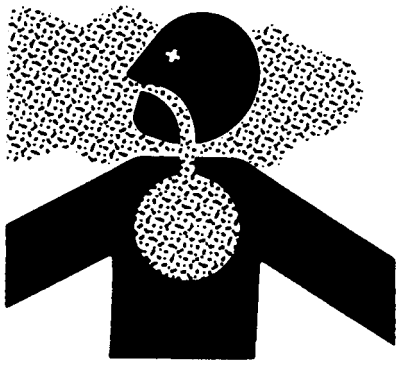
Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.



TS220 —UN—15APR13

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

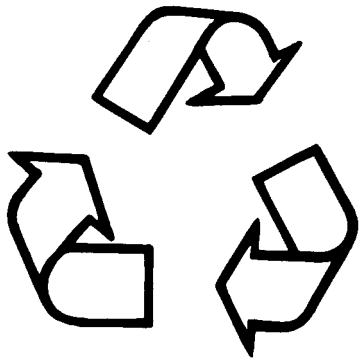
Dispose of paint and solvent properly.

DX,PAINT -19-24JUL02-1/1

## Decommissioning — Proper Recycling and Disposal of Fluids and Components

Safety and environmental stewardship measures must be taken into account when decommissioning a machine and/or component. These measures include the following:

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid);



TS1133 —UN—15APR13

filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.

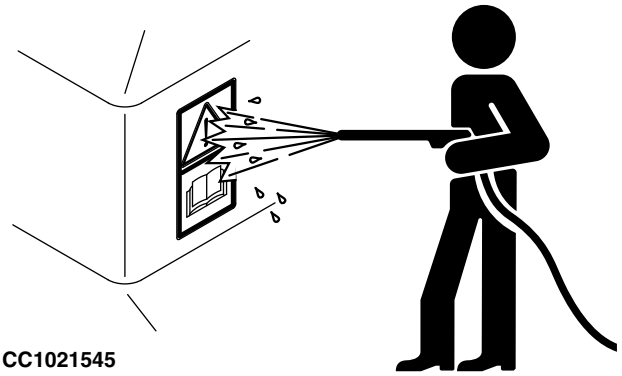
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your Kemper dealer for information on the proper way to recycle or dispose of waste.

km00321,1682084326854 -19-21APR23-1/1

## Avoid High-Pressure Jet on Safety Decals

The water jet can remove or damage safety decals. Avoid to direct the water jet on safety decals.

Immediately replace missing or damaged safety decals. Replacement safety decals are available from your Kemper dealer.



**CC1021545**

CC1021545 —UN—23APR02

km00321,1682084404506 -19-21APR23-1/1

# Safety Decals

## Pictorial Safety Signs

At several important places of this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown below.



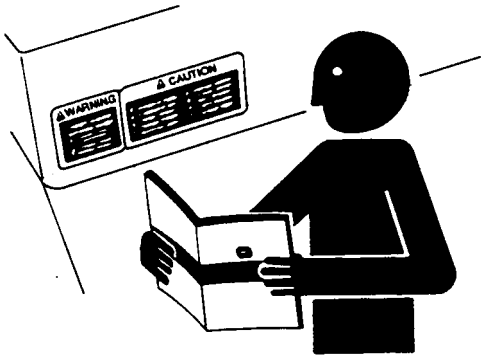

TS231 —19—07OCT88

FX,WBZ -19-22MAR23-1/1

## Replace Safety Signs

Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

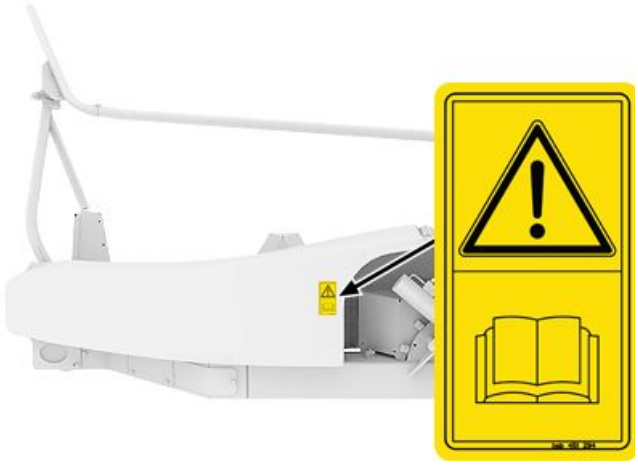



TS201 —UN—15APR13

DX,SIGNS -19-18AUG09-1/1

## Operator's Manual

This operator's manual contains all important information necessary for safe machine operation. Carefully observe all safety rules to avoid accidents.

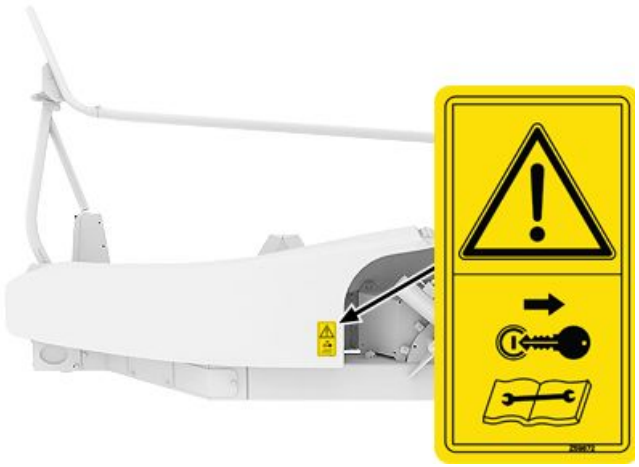


KM573190 —UN—28APR23

km00321,1682664378431 -19-28APR23-1/1

## Repair and Maintenance

Before carrying out adjustment, repair and maintenance work, shut off forage harvester engine and remove ignition key.



KM573622 —UN—28APR23

*475pro Rotary Harvesting Unit shown*

km00321,1682669995365 -19-02MAY23-1/1

## Rotating Blades

Do not touch any moving machine parts. Wait until all moving parts have stopped.

The rotating blades are not immediately stopped when the machine is shut down.

Rotating blades can catch arms, legs or loose clothing as long as they are in motion and can cause serious injury.




KM573192 —UN—28APR23

*475pro Rotary Harvesting Unit shown*




KM573193 —UN—28APR23

*475pro Rotary Harvesting Unit shown*

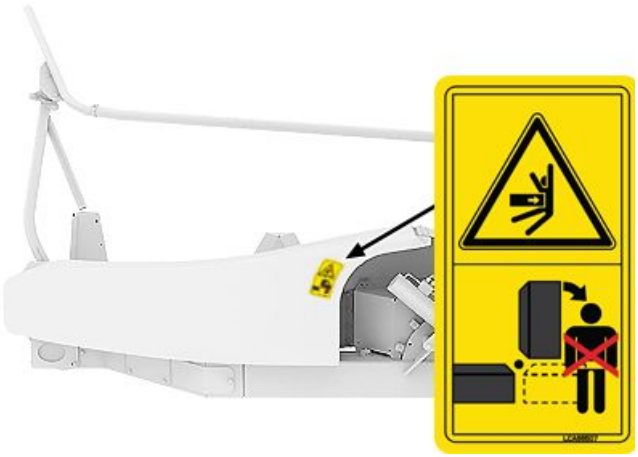
km00321,1682664560918 -19-02MAY23-1/1

## Folding Area

Stay clear of the folding area of the rotary harvesting unit.

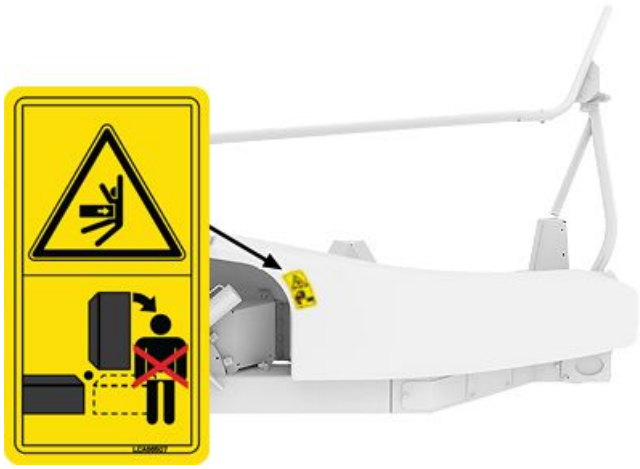
When folding or unfolding the rotary harvesting unit, ensure that no persons are standing within the folding area.

Before folding or unfolding, ensure that all persons keep the required safety distance from the rotary harvesting unit.



KM573194 —UN—28APR23

*475$^{pro}$ Rotary Harvesting Unit shownn*



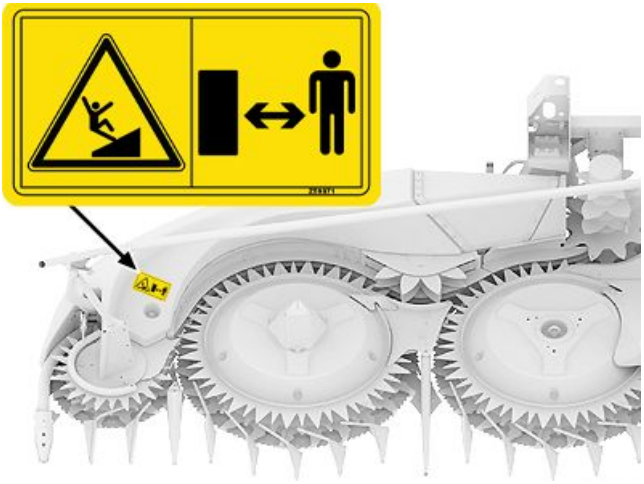
KM573195 —UN—28APR23

*475$^{pro}$ Rotary Harvesting Unit shown*

km00321,1682669145621 -19-02MAY23-1/1

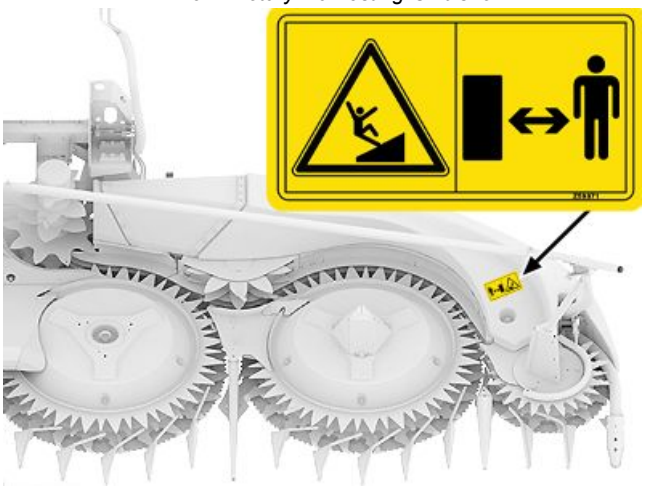
## Stay Clear of Rotary Harvesting Unit

DANGER - stay clear of header. Disengage header drive, shut off engine and remove key before servicing or unclogging header.



KM573196 —UN—28APR23

*475pro Rotary Harvesting Unit shown*



KM573197 —UN—28APR23

*475pro Rotary Harvesting Unit shown*

km00321,1682669328935 -19-02MAY23-1/1

## Rotating Drums

Stay clear of rotating drums to avoid personal injury.

Arms, legs or loose clothing might become caught by the rotating drums when in operation.

Always keep the required safety distance from the rotating drums.

Wait until all moving parts have stopped.



KM573198 —UN—28APR23

*475pro Rotary Harvesting Unit shown*



KM573199 —UN—28APR23

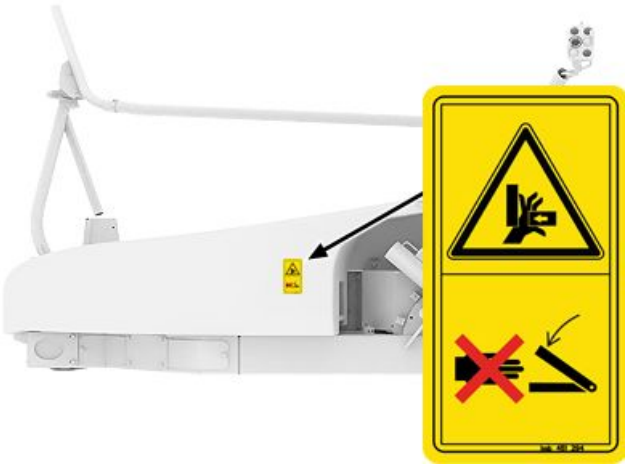
*475pro Rotary Harvesting Unit shown*

km00321,1682669768903 -19-02MAY23-1/1

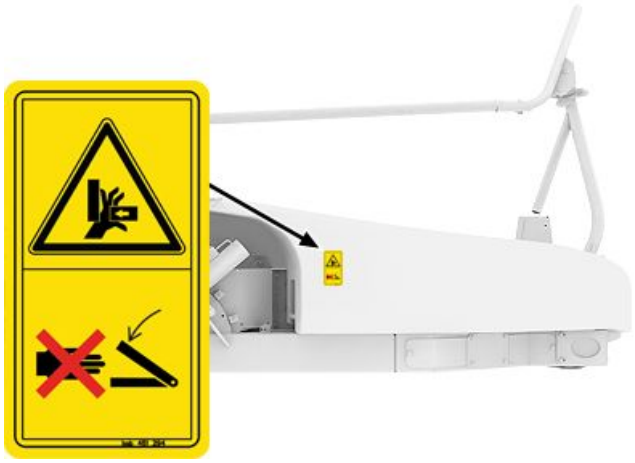
## Foldable Frame

Never reach into the crushing danger area as long as the outer end sections are moving.

Reaching into crushing danger area can cause serious injury.




*475pro Rotary Harvesting Unit shown*



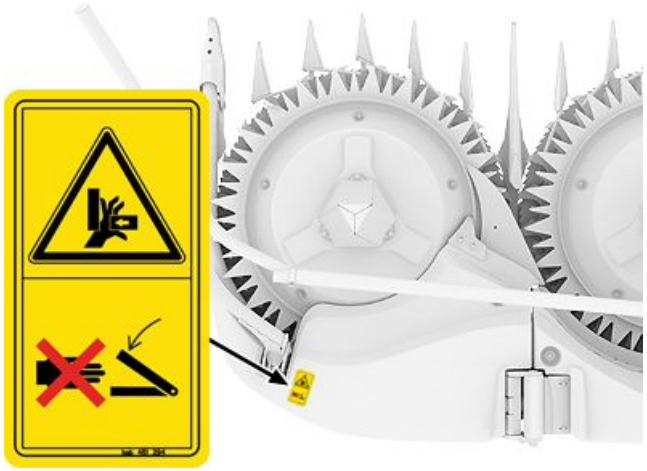

*475pro Rotary Harvesting Unit shown*

km00321,1682670112789 -19-02MAY23-1/1

## Foldable Feed Bars (490pro Only)

Never reach into the crushing danger area as long as the outer feed bars s are moving.

Reaching into crushing danger area can cause serious injury.



KM574653 —UN—03MAY23



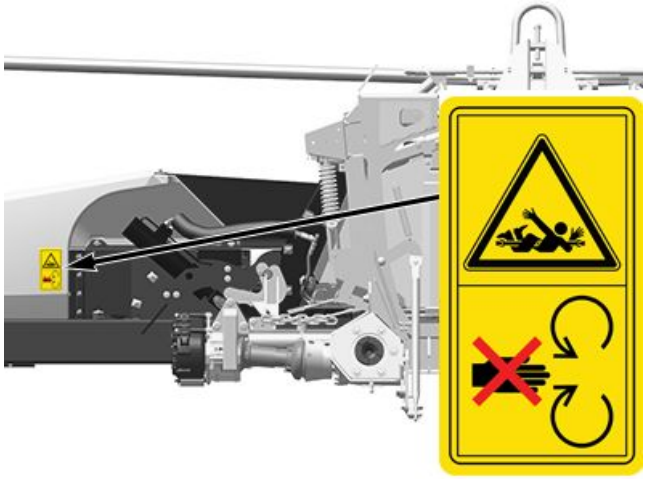
KM575586 —UN—03MAY23

km00321,1681373399925 -19-28APR23-1/1

## Stay Clear of Rotating Driveline

Stay clear of rotating driveline.

Entanglement in rotating driveline can cause serious injury or death. Always keep driveline shields in place.



KM575590 —UN—03MAY23

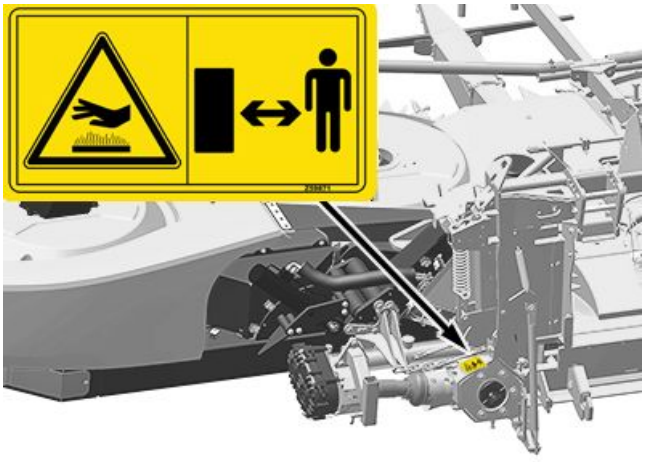
km00321,1683115941761 -19-03MAY23-1/1

## Input Transmission

Input transmission can cause excessive heat.

Stay clear of hot surface.

Hot surface can cause serious burns.



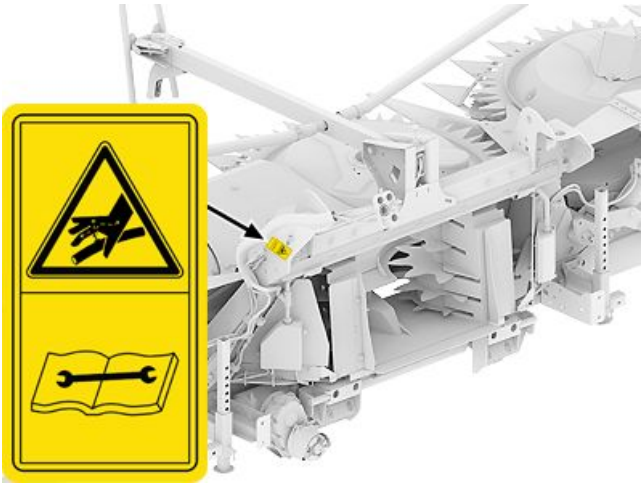
KM575591 —UN—05MAY23

km00321,1683116449271 -19-03MAY23-1/1

## Hydraulic Lines

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines.



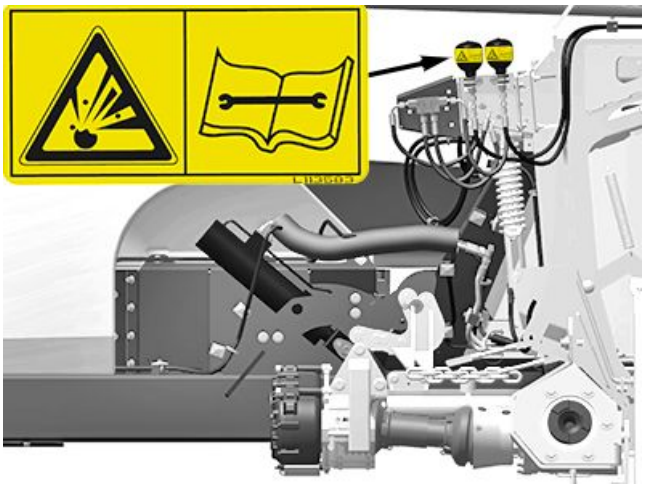
KM574652 —UN—28APR23

km00321,1681373435326 -19-28APR23-1/1

## Accumulator - Automatic Header Height Control (Optional, Headers for Claas Forage Harvesters)

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.



KM575596 —UN—05MAY23

km00321,1683286362993 -19-05MAY23-1/1

## Haulage With a Forklift - General

**CAUTION: If the rotary harvesting unit is hauled with a forklift, observe the following safety instructions:**

- **The driver must be trained and entitled to drive a forklift.**
- **Use a forklift that meets the weight requirements of the rotary harvesting unit (see “Specifications” Section).**
- **Use pallet forks with a suitalbe length.**
- **Chain the pallet to the forklift to prevent it from tipping off.**
- **Rain, ice and snow can reduce friction on the pallet forks. Drive carefully and adapt the speed to the environmental conditions.**

KM00321,0000C2D -19-08OCT21-1/1

## Loading a 460pro and 475pro Rotary Harvesting Unit with a Crane

### Lifting the Header With a Traverse




**A—Chains** **B—Chains** **C—Traverse**

**CAUTION: When loading the rotary harvesting unit with a crane, always use the suspension points. This prevents the machine from toppling over.**

**Make sure to use chains and hoisting devices that meet the weight requirements of the rotary harvesting unit (see "Specifications" section).**

**IMPORTANT: The lifting eye nuts in the gathering drums must be screwed in completely.**

The chains (A) and (B) must be pulled upwards **vertically**. Therefore, use a traverse (C).

**CAUTION: Lifting the header without a traverse will pull the chains at an angle and leads to an overload of the lifting eye nuts in the gathering drums.**

**Continued on next page**

km00321,1681378041532 -19-06FEB24-1/2

**Lifting the Header With Optional Lifting Eye Nut Kit**

**CAUTION: When loading the rotary harvesting unit with a crane, always use the suspension points. This prevents the machine from toppling over.**

**Make sure to use chains and hoisting devices that meet the weight requirements of the rotary harvesting unit (see "Specifications" section).**

When lifting the header without a traverse, a special kit is required. This kit is mandatory and consists of two heavy-duty lifting eye nuts (A).

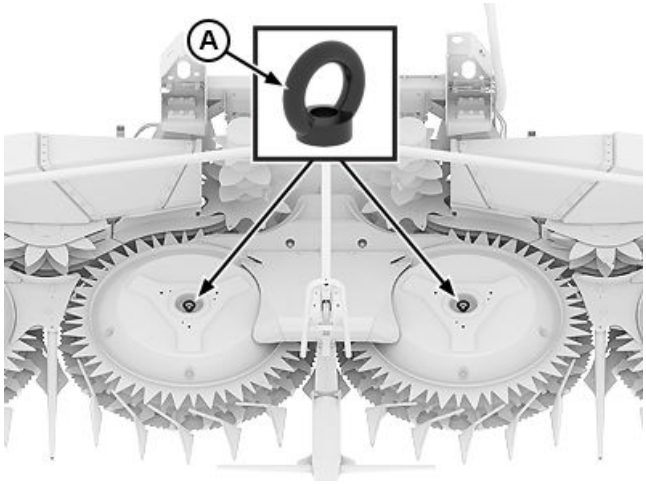
*NOTE: The kit is available through spare parts channel. Contact your dealer.*

1. Remove the existing lifting eye nuts in the two center gathering drums and install the heavy-duty lifting eye nuts (A).

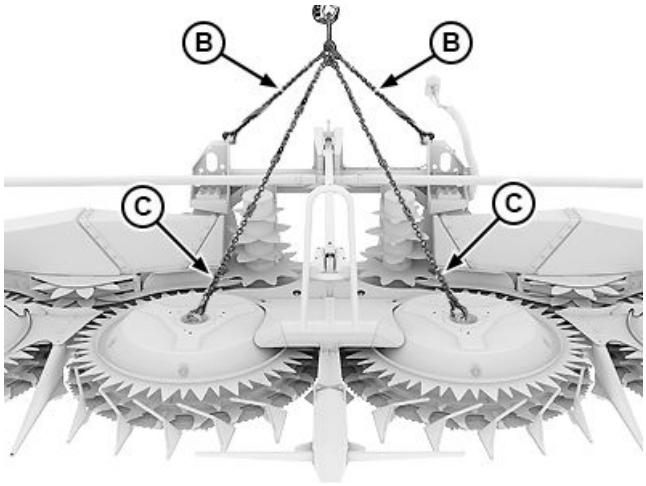
   **IMPORTANT: The lifting eye nuts (A) must be screwed in completely. Only tighten the lifting eye nuts (A) by hand.**

2. Lift the header by using chains (B) and (C) with the relevant length as shown on illustration.

**A—Heavy-Duty Lifting Eye Nuts**
**B—Chain, 1540 mm (5 ft 0.62 in.)**
**C—Chain, 1600 mm (5 ft 2.99 in.)**




KM574655 —UN—28APR23




KM574656 —UN—28APR23

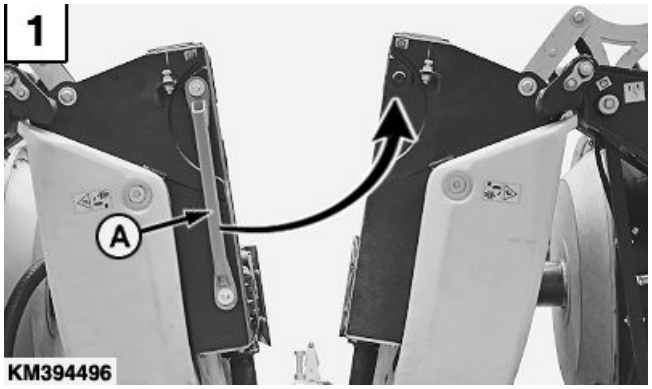
km00321,1681378041532 -19-06FEB24-2/2

## Loading a 490pro Rotary Harvesting Unit with a Crane

**IMPORTANT: Before loading the rotary harvesting unit with a crane, it is essential to install the support (A) in the haulage position. Failure to do so will result in machine damage.**

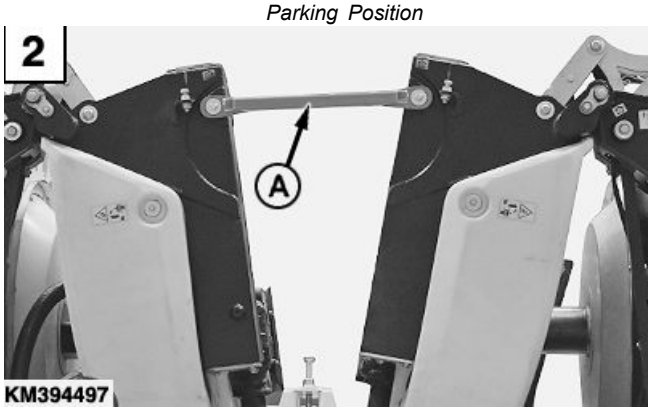
1. Fold the support (A) out of its parking position (1) in the direction of the arrow.
2. Install the support (A) in the haulage position (2).

**A—Support**




KM394496 —UN—21OCT19

*Parking Position*



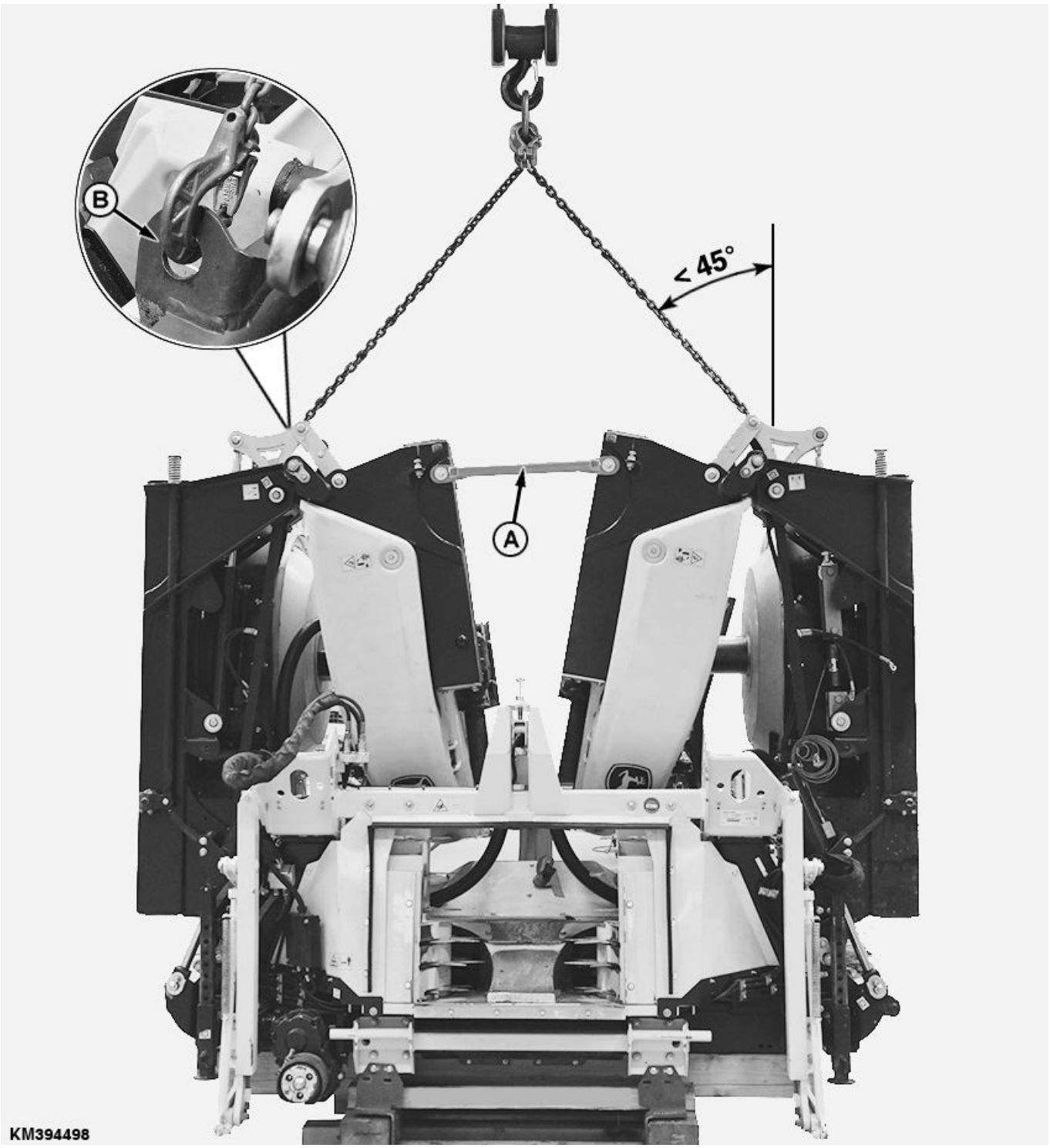

KM394497 —UN—21OCT19

*Haulage Position*

**Continued on next page**

km00321,1681378736623 -19-13APR23-1/2

**Lift the Rotary Harvesting Unit with a Crane**




**A—Support** **B—Hanging Points**

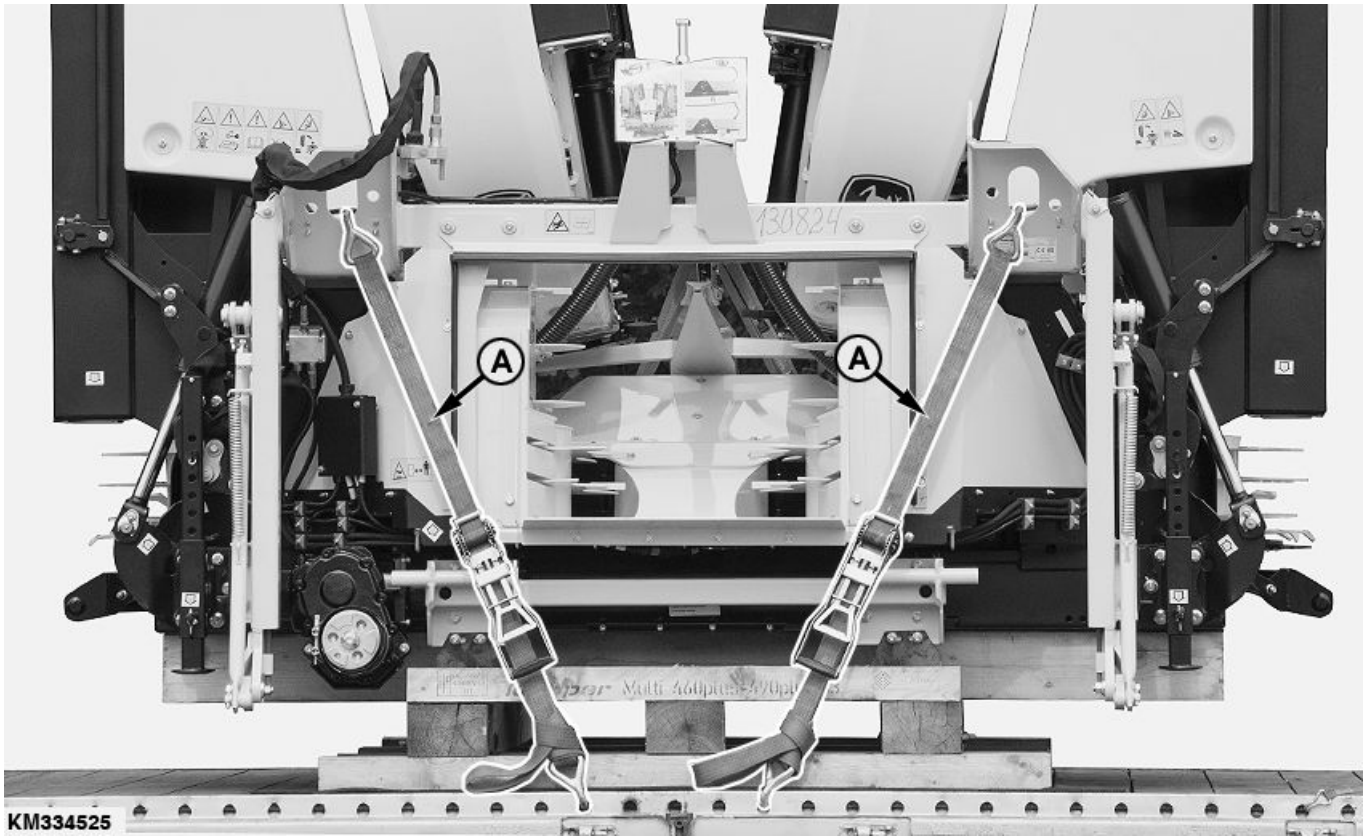
**⚠ CAUTION: Make sure to use chains that meet the weight requirements of the rotary harvesting unit (see "Specifications" Section).**

**Use chains with an appropriate length to meet an angle of less than 45° as shown in the illustration.**

1. Fold up the rotary harvesting unit.
2. Make sure that support (A) is installed in the haulage position as shown.
3. Attach a crane to the two hanging points (B).
4. Lift the rotary harvesting unit.

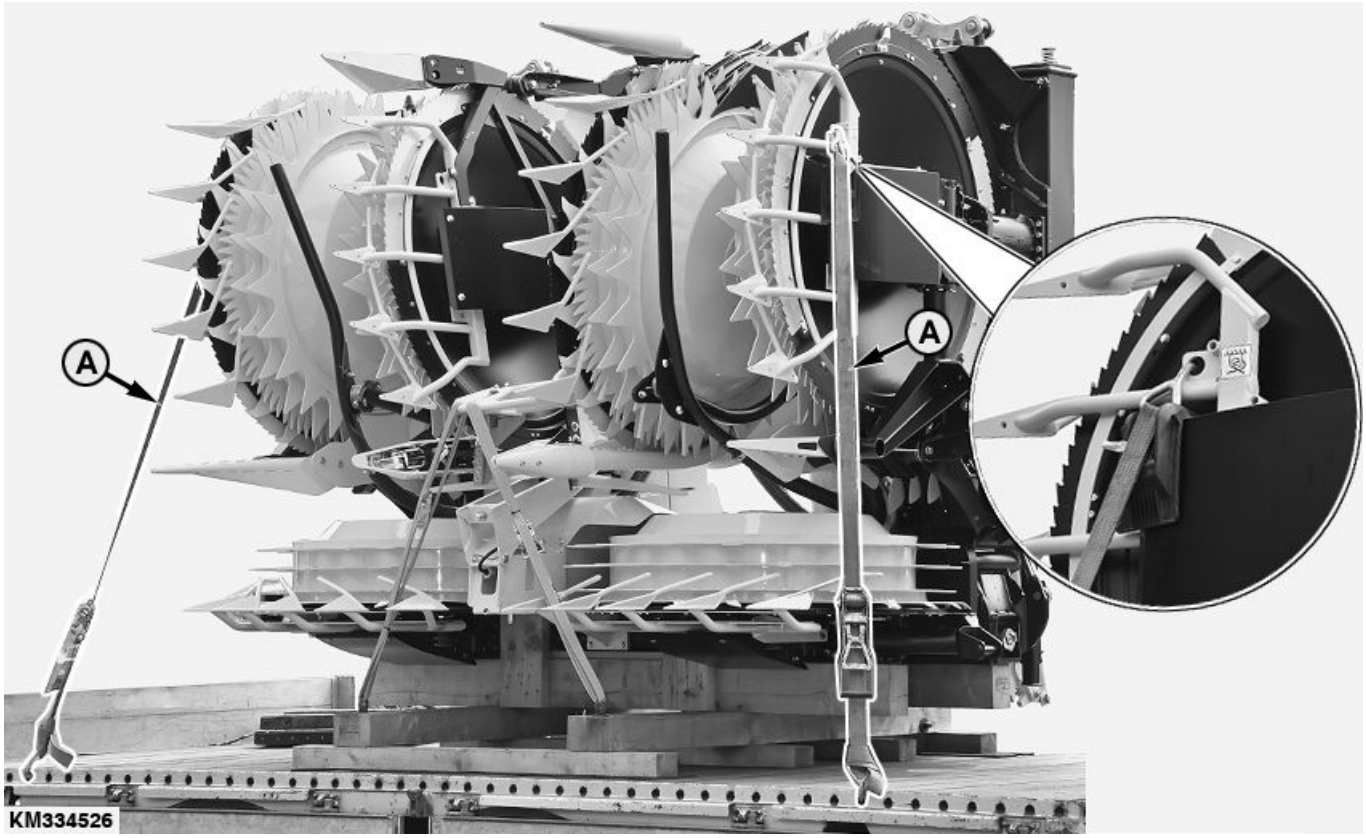
km00321,1681378736623 -19-13APR23-2/2

## Secure the Rotary Harvesting Unit for Transport (460pro and 490pro)




KM334525 —UN—24OCT17

*Lashing Points*




KM334526 —UN—24OCT17

*Lashing Points*

**A—Tensioner Belts**

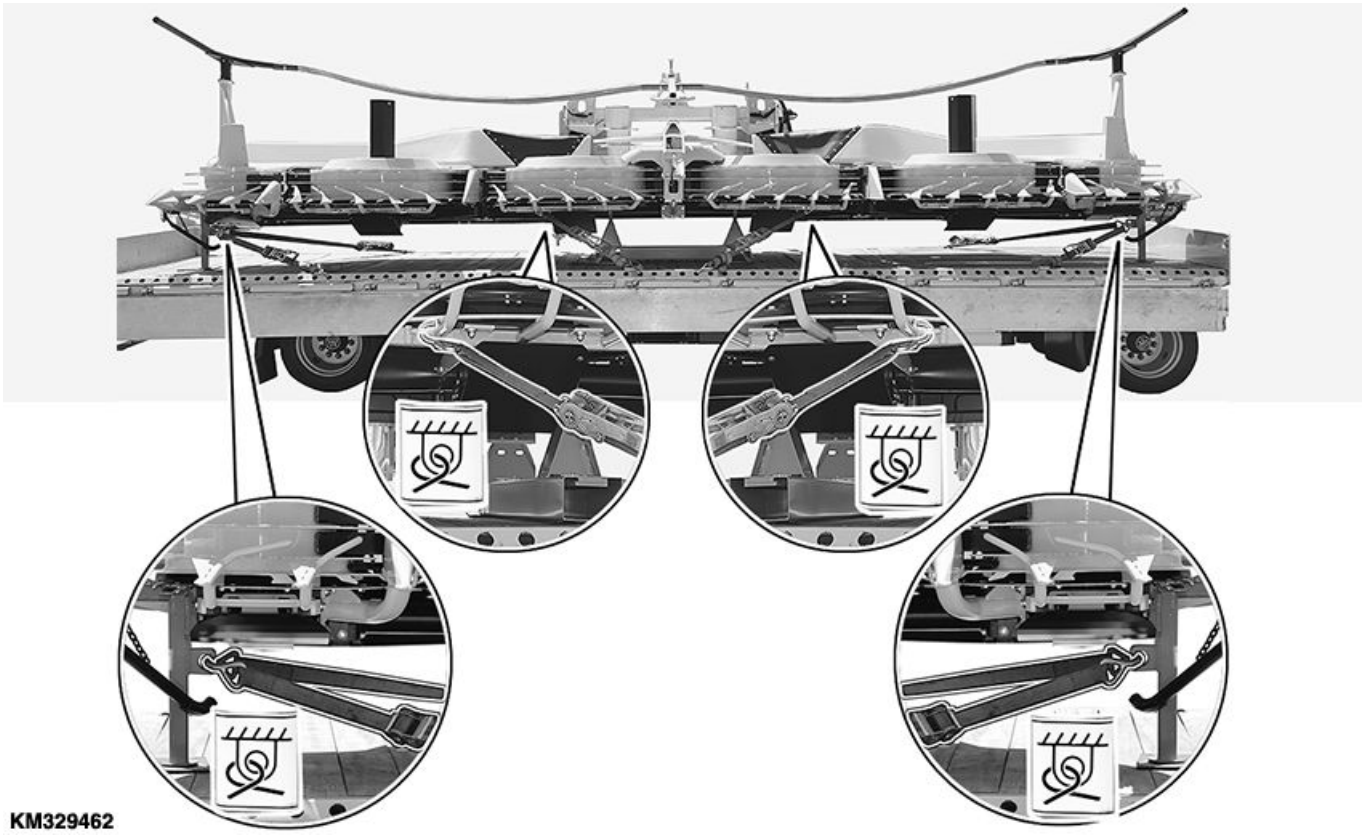
**Continued on next page**

km00321,1682674881465 -19-28APR23-1/2

Secure rotary harvesting unit with tensioner belts (A) on both sides as shown. Secure accessories with an additional tensioner belt (optional).

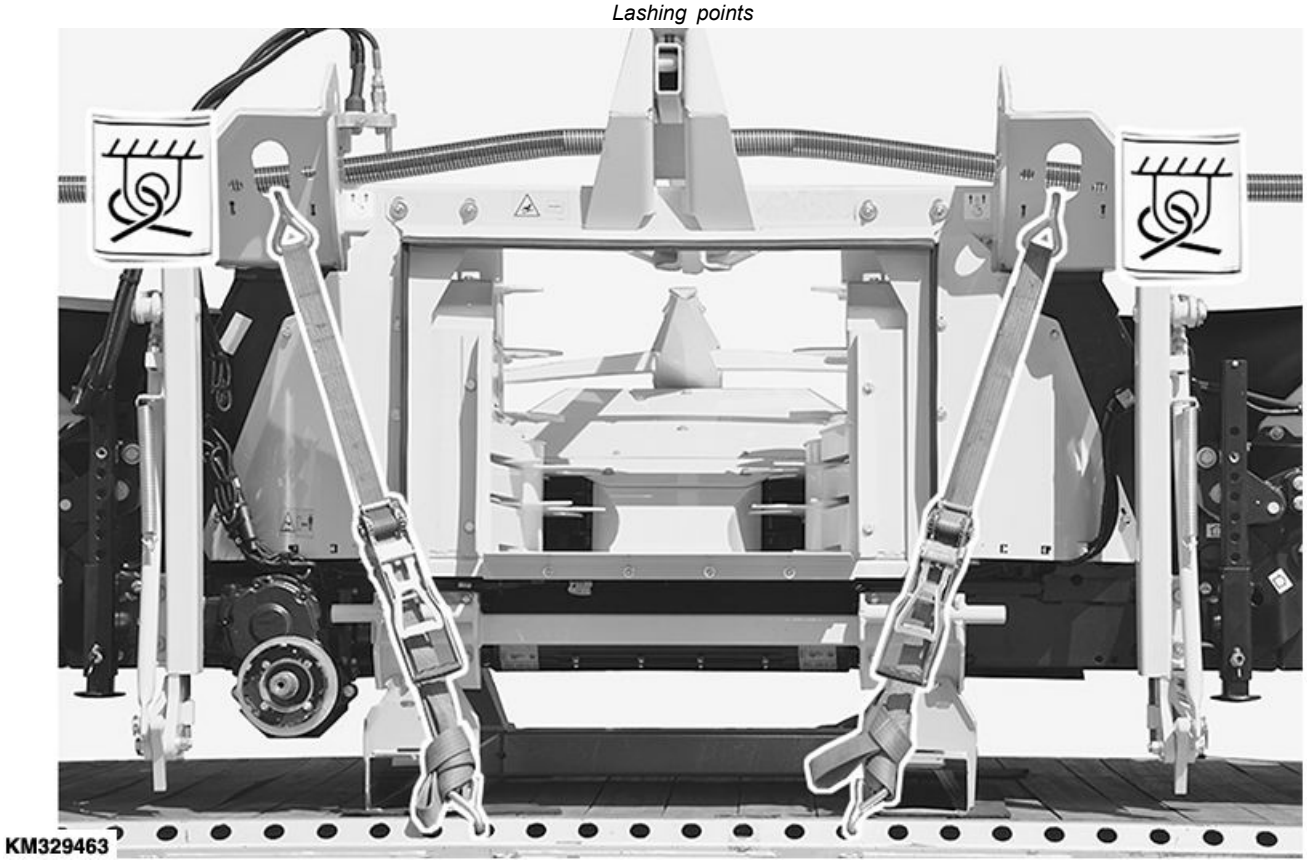
km00321,1682674881465 -19-28APR23-2/2

## Secure the Rotary Harvesting Unit for Transport (475pro)




KM329462 —UN—29SEP17

*Lashing points*




KM329463 —UN—29SEP17

**Continued on next page**

km00321,1683025087884 -19-02MAY23-1/2

*Lashing points*

km00321,1683025087884 -19-02MAY23-2/2

## Unpacking

As soon as packaging material is removed, check the unit for any damage that might have been incurred during transport.

jzsgtac,1679408968286 -19-22MAR23-1/1

## Remove the Transport Supports (475pro Only)

Remove transport supports on left-hand side and right-hand side.



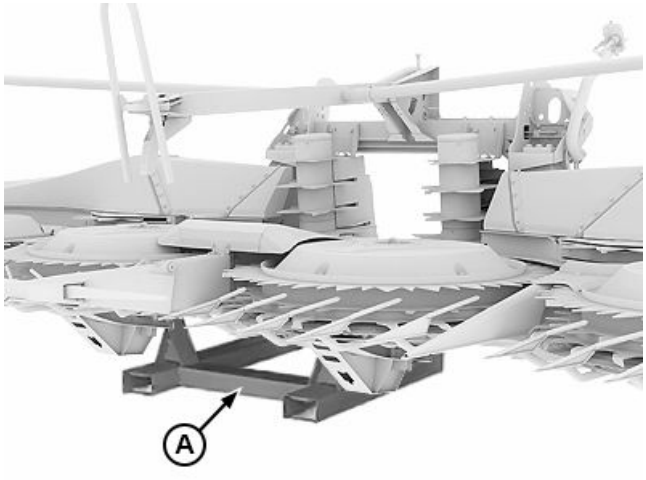

KM232864 —UN—12FEB15

km00321,1681397040862 -19-13APR23-1/1

## Remove the Transport Pallet (460pro and 475pro)

Remove the transport pallet (A).

**A—Transport pallet**



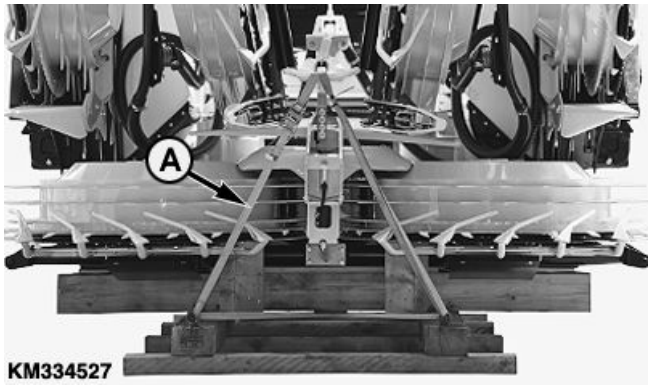

KM574658 —UN—28APR23

km00321,1681397076852 -19-28APR23-1/1

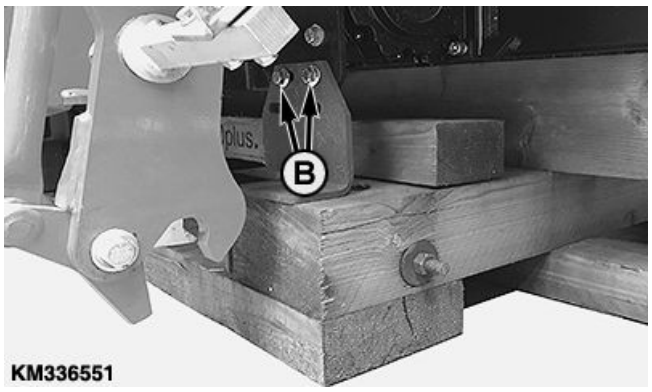
## Remove the Transport Pallet (490pro)

1. Remove tensioner belt (A).
2. Loosen and remove screws (B) on both sides.
3. Lift the rotary harvesting unit and remove the transport pallet (C).

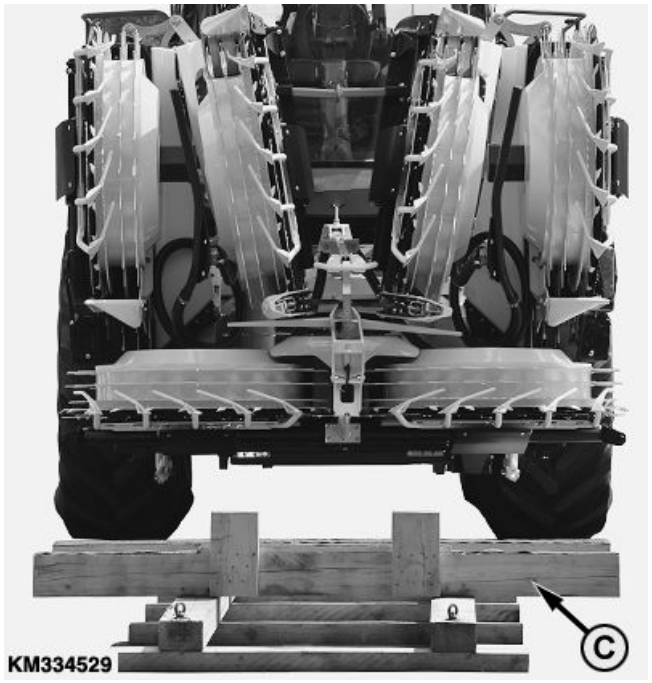
**A—Tensioner Belt**
**B—Screws**
**C—Transport Pallet**




KM334527 —UN—24OCT17




KM336551 —UN—10JAN18




KM334529 —UN—28FEB18

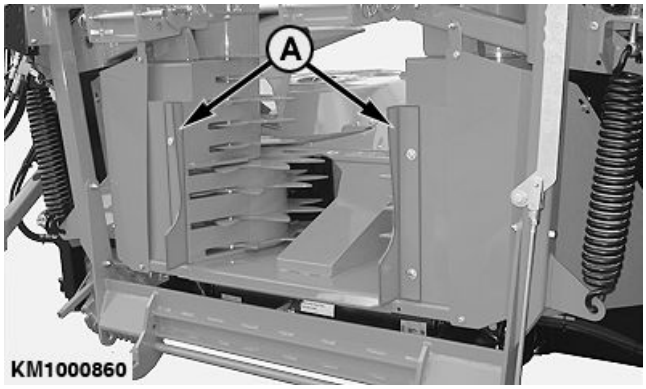
km00321,1683031805633 -19-02MAY23-1/1

## Adapt the Scrapers to the Feed Passage

Before attaching the rotary harvesting unit to the forage harvester, ensure that the scrapers (A) match with the channel width of the forage harvester.

The scrapers (A) must be adjusted to the channel width of the relevant forage harvester.

**A—Scraper**




KM1000860 —UN—20MAY09

jzsgtac,1679408979224 -19-22MAR23-1/1

# Attaching to a Claas Forage Harvester

## Compatibility Chart

**CAUTION: Before attaching the rotary harvesting unit to a forage harvester, carry out the steps included in Section Preparing the Rotary Harvesting Unit.**

The rotary harvesting unit is prepared for installation on the following Claas forage harvester types:

**Rotary harvesting unit/Claas forage harvester compatibility chart**

| | |
|---|---|
| 460$^{pro}$ | 840 Type 496/500<br>850 Type 496/500<br>860 Type 496/500<br>870 Type 496/500<br>930 Type 494/497/498/502<br>940 Type 494/497/498/502<br>950 Type 494/497/498/502<br>960 Type 494/497/498/499/502<br>970 Type 494/497/498/502<br>980 Type 494/497/498/502<br>990 Type 494/497/498/499/502 |
| 475$^{pro}$ | 860 Type 496/500<br>870 Type 496/500<br>940 Type 494/497/498/502<br>950 Type 494/497/498/502<br>960 Type 494/497/498/499/502<br>970 Type 494/497/498/502<br>980 Type 494/497/498/502<br>990 Type 494/497/498/499/502 |
| 490$^{pro}$ | 950 Type 498/502<br>960 Type 498/499/502<br>970 Type 498/502<br>980 Type 498/502<br>990 Type 498/499/502 |

km00321,1738054635861 -19-29JAN25-1/1

## Ballasting Harvester

Before attaching the rotary harvesting unit, make sure harvester is ballasted correctly.

**IMPORTANT: Always refer to the information given in Wheels and Ballast Section of the forage harvester operator's manual.**

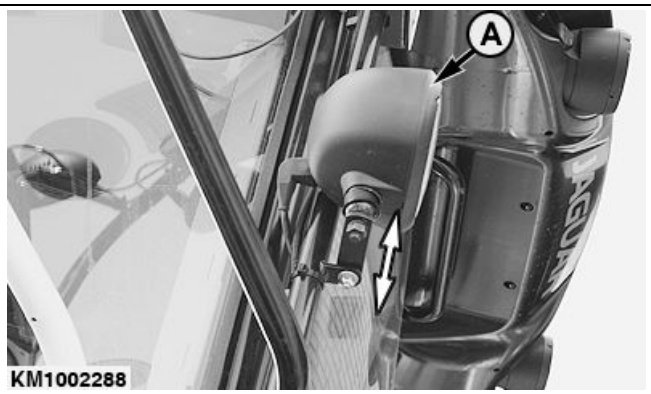
jzsgtac,1679409229461 -19-22MAR23-1/1

## Adjust Additional Headlights on Forage Harvester

**IMPORTANT: When folding the rotary harvesting unit, there is a risk of collision with the forage harvester's auxiliary headlights (A).**

To avoid a collision when folding the mower attachment, adjust the forage harvester's auxiliary headlights (A) as far outward as possible.

**A—Auxiliary headlights**




KM1002288 —UN—07MAY12

km00321,1683034056280 -19-02MAY23-1/1

## Cancel Error Codes when Folding the Rotary Harvesting Unit

### Error Code ID9854

If the following error code ID9854 (A) appears:

**"Front attachment position sensor for transport position and working position reports no plausible condition"**

Press the [X] button to cancel error code (A).

*NOTE: Error code (A) is for Orbis headers and has no significance for Kemper headers.*

**A—Error Code ID9854**




KM625427 —19—31JAN25

km00321,1738067827978 -19-27FEB25-1/2

### Error Code ID2522

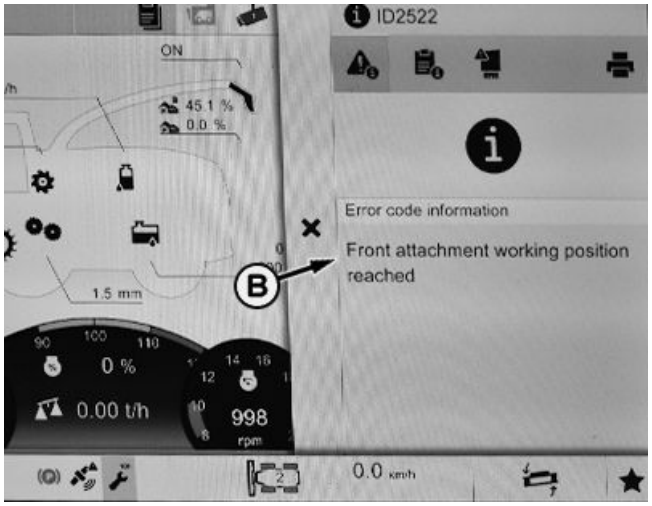
If the following error code ID2522 (B) appears:

**"Front attachment working position reached"**

Press the [X] button to cancel error code (B).

*NOTE: Error code (B) is for Orbis headers and has no significance for Kemper headers.*

**B—Error Code ID2522**




KM625430 —19—31JAN25

km00321,1738067827978 -19-27FEB25-2/2

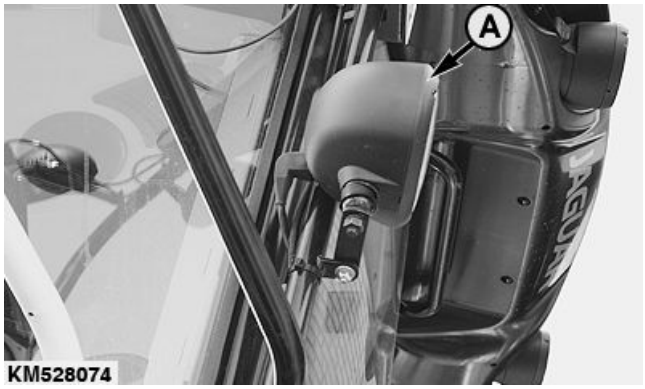
## Mounting the Cab Roof Light (475pro Only)

**IMPORTANT: For driving on the road, ensure that the lights (A) are not covered by the folded up mowing units.**

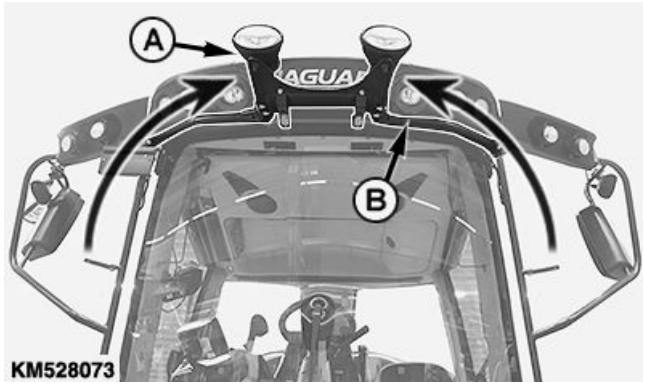
To do this, remove the lights (A) from the cab frame and mount them on the cab roof using the bracket (B).

*NOTE: The bracket (B) is available as supplementary equipment.*

**A—Lights** **B—Bracket**



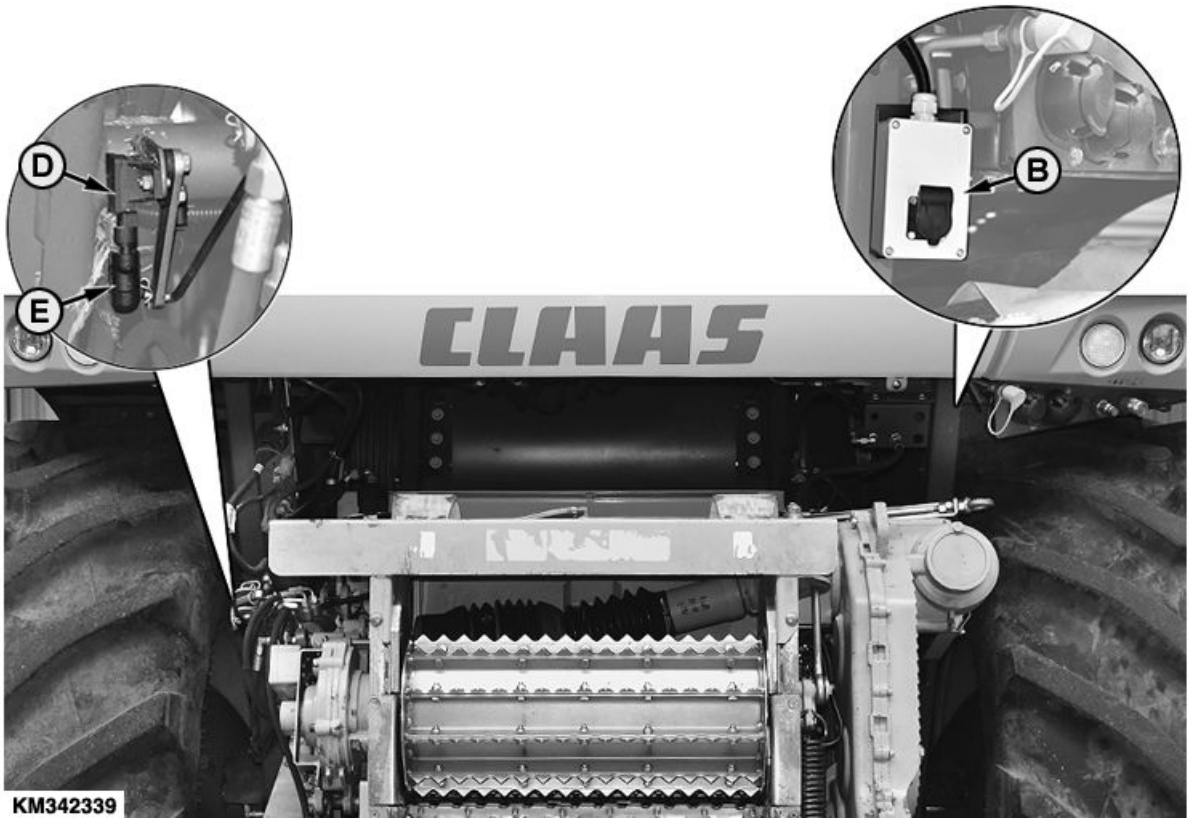

KM528074 —UN—21JAN22




KM528073 —UN—20JAN22

jzsgtac,1679409336423 -19-02MAY23-1/1

## Install Additional Wiring Harness—Forage Harvesters Types 498, 499, and 502 (Optional for Types 496 and 497)




KM342339 —UN—03JUL18

**IMPORTANT: The additional wiring harness is supplied with the following rotary harvesting units and must be mounted on the forage harvester:**

- **All rotary harvesting units that are equipped for the attachment of the support wheel**
- **All 10-row and 12-row rotary harvesting units**

*NOTE: The additional wiring harness is required for the rotary harvesting unit to be folded in the raised position.*

The supplied wiring harness must be installed on the Claas forage harvesters of types 498, 499, and 502 before attaching the rotary harvesting unit for the first time.

**IMPORTANT: When attaching a header to a Type 496 or 497 Forage Harvester, which is designed for attachment to a Type 498, 499, or 502 Forage Harvester, the additional wiring harness must also be installed.**

To do so, proceed as follows:

1. Pull out connector (E) from angle sensor (D) of the forage harvester.




KM342337 —UN—02JUL18

**A—Connector (2 used)**
**B—Socket Outlet**
**C—Connecting Cable**
**D—Angle Sensor**
**E—Connector**

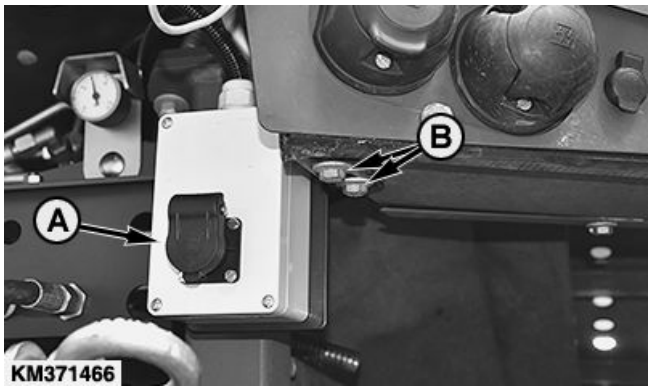
2. Connect connectors (A) of the supplied wiring harness between angle sensor (D) and connector (E) on the forage harvester.

**Continued on next page**

3. Install socket outlet (A) on the Claas forage harvester with screws (B).

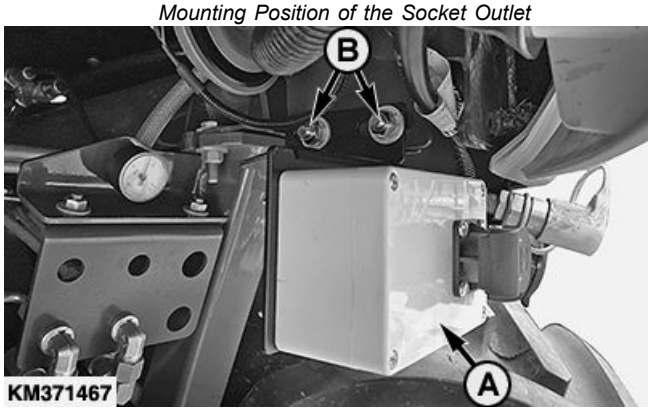
*NOTE: The mounting position of the socket outlet varies and depends on the model year of the forage harvester.*

**A—Socket Outlet** **B—Screw (2 used)**




KM371466 —UN—08FEB19

*Mounting Position of the Socket Outlet*




KM371467 —UN—08FEB19

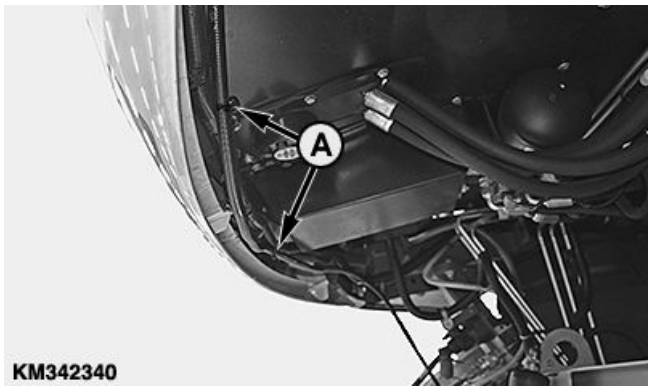
*Mounting Position of the Socket Outlet*

km00321,1682086332909 -19-04MAR25-2/4

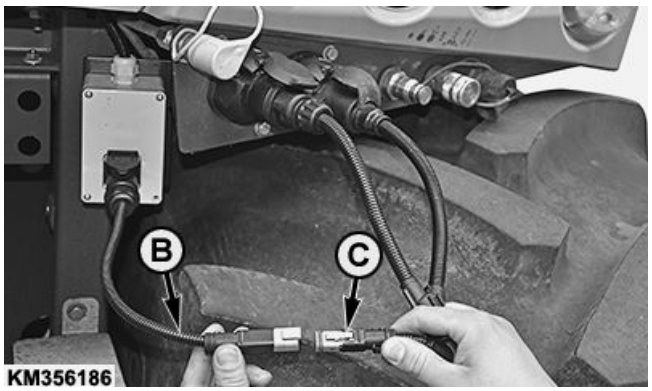
4. Fix the remaining cables with cable binders (A) behind the front cover.
5. Plug connection cable (B) into the socket outlet and connect it to the main wiring harness (C).

*NOTE: The socket outlet can remain mounted on the forage harvester after the corn harvest. As long as no plug is inserted, the socket outlet has no function.*

**A—Cable Binder**
**B—Connection Cable**
**C—Main Wiring Harness**




KM342340 —UN—02JUL18




KM356186 —UN—03JUL18

**Continued on next page**

km00321,1682086332909 -19-04MAR25-3/4

### Cancel Error Code when Folding the Rotary Harvesting Unit

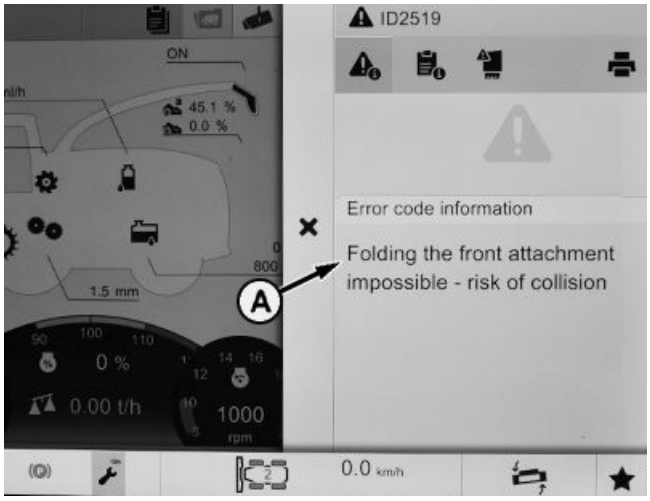
If the following error code ID2519 (A) appears when folding the rotary harvesting unit:

**"Folding the front attachment impossible - risk of collision"**

Press the [X] button to cancel error code (A).

*NOTE: Error code (A) is for Orbis headers to prevent damage to the forage harvester cab during the sandwich folding. The Kemper header does not have a sandwich folding mechanism.*

**IMPORTANT: If the error code appears and the rotary harvesting unit cannot be folded, the additional wiring harness is either not installed or not connected properly.**




KM625425 —19—30JAN25

**A—Error Code ID2519**

km00321,1682086332909 -19-04MAR25-4/4

## Attach Rotary Harvesting Unit to Types 498, 499, and 502 Forage Harvesters with Variable Header Drive

Rotary harvesting units for the Claas type 498, 499, and 502 forage harvesters are technically prepared for the variable header drive.

**In addition, programming steps are required in the forage harvester software. Contact the Claas dealer.**

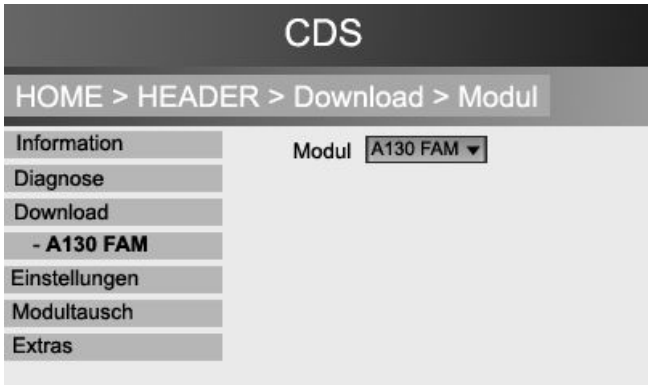
**IMPORTANT: To use the variable header drive, module A130FAM must be programmed for the header drive. Otherwise, the rotary harvesting unit can only be used with constant speed and the adjustment of the header speed is carried out via the Kemper multi-speed gear case.**

For rotary harvesting units that are equipped for mounting a support wheel, first it is necessary to delete the existing software on the rotary harvesting unit module. Then the module name A130FAM is visible.

*NOTE: If the request to enter an activation code appears, the existing software on the controller has not been successfully deleted.*

Programming of the A130FAM module takes place via the forage harvester. To do so, proceed as follows:

1. Attach the rotary harvesting unit to the forage harvester.
2. Connect the forage harvester to a computer and start the Claas Diagnostics System (CDS).
3. Select the A130FAM module for programming the rotary harvesting unit.




KM359969 —UN—22FEB19

Continued on next page

km00321,1734613490177 -19-05MAR25-1/6

4. Enter the relevant serial number using the following table as a reference.

**IMPORTANT: Enter a serial number of a rotary harvesting unit that corresponds to the working width of the Kemper rotary harvesting unit.**




KM359968 —UN—22FEB19

| Rotary Harvesting Unit Model | Corresponding Machine Type | Machine Identifier | Serial Number |
|---|---|---|---|
| 345$^{pro}$ | Orbis 450 | 657 | 657 0 1234 |
| 360$^{pro}$/460$^{pro}$/460$^{pro}$ StalkBuster™ without support wheel | Orbis 600 | 658 | 658 0 1234 |
| 360$^{pro}$/460$^{pro}$/460$^{pro}$ StalkBuster™ with support wheel | Orbis 750 | 659 | 659 0 1234 |
| 375$^{pro}$/475$^{pro}$ | Orbis 750 | 659 | 659 0 1234 |
| 390$^{pro}$/490$^{pro}$ | Orbis 900 | 992 | 992 0 1234 |

**Serial Number Format:**

- **Position 1—3:** Machine identifier
- **Position 4:** 0
- **Position 5—8:** Any 4-digit serial number, e. g., 1234

**IMPORTANT: When attaching a 460$^{pro}$ or a 460$^{pro}$ StalkBuster™ with support wheel, the serial number for the 10-row header must be used to activate the float mode during road travel.**

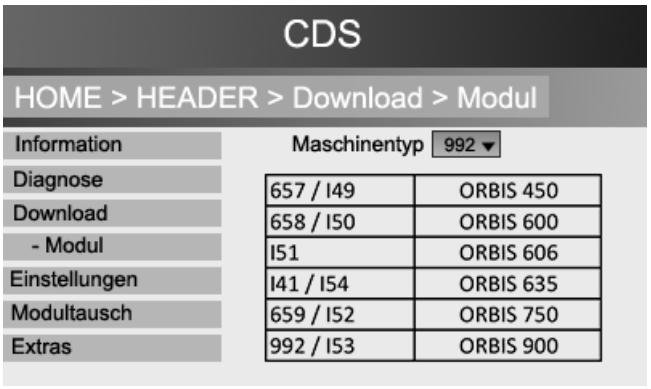
**Continued on next page**

5.

**IMPORTANT: The following entries must be approved by Claas.**

*NOTE: Use the old Orbis types when selecting the type of machine.*

*For example, in the case of an Orbis 900, select type 992 and not type I53 (see illustration).*




KM359967 —UN—22FEB19

6. Select one of the following settings depending on the header model:

| Rotary Harvesting Unit Model | Machine Type | Transmission | Transport System |
|---|---|---|---|
| 345$^{pro}$ | Orbis 450 | 3-speed transmission | No transport system |
| 360$^{pro}$/460$^{pro}$ without support wheel | Orbis 600 | 3-speed transmission | No transport system |
| 360$^{pro}$/460$^{pro}$ with support wheel | Orbis 750 | 3-speed transmission | Transport wagon |
| 375$^{pro}$/475$^{pro}$ without support wheel | Orbis 750 | 3-speed transmission | No transport system |
| 375$^{pro}$/475$^{pro}$ with support wheel | Orbis 750 | 3-speed transmission | Transport wagon |
| 390$^{pro}$/490$^{pro}$ without support wheel | Orbis 900 | 3-speed transmission | No transport system |
| 390$^{pro}$/490$^{pro}$ with support wheel | Orbis 900 | 3-speed transmission | Transport wagon |

7. Additionally, select the setting "variable drive" for each type.

**Continued on next page**

**IMPORTANT: Multi-speed gear case (A) must be shifted into 3rd gear to enable the variable header drive.**

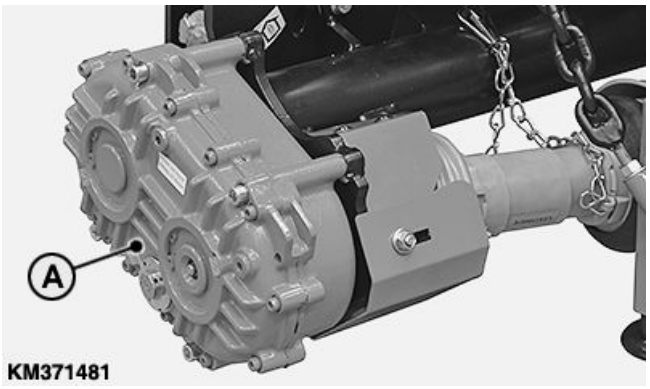
8. If the following error code ID25B3 (B) appears:

   **"Variable front attachment drive not enabled - front attachment is driven constantly"**

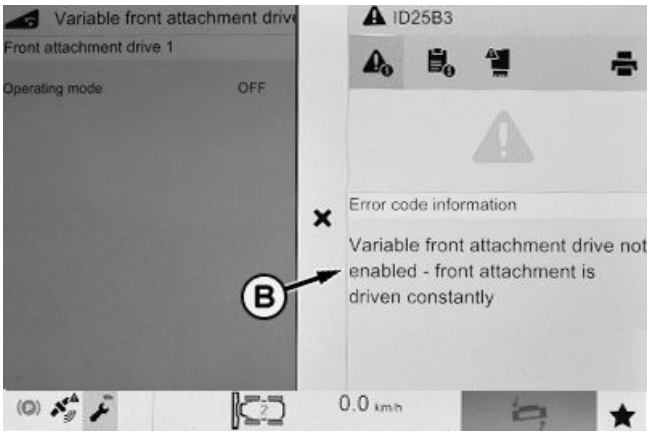
   Shift multi-speed gear case (A) into 3rd gear. (See Adjusting Gear Selection with Multi-Speed Gear Case for Claas Forage Harvesters in Operating the Rotary Harvesting Unit section.)

9. Reverse the header before re-engaging the drive.

**A—Multi-Speed Gear Case** **B—Error Code ID25B3**



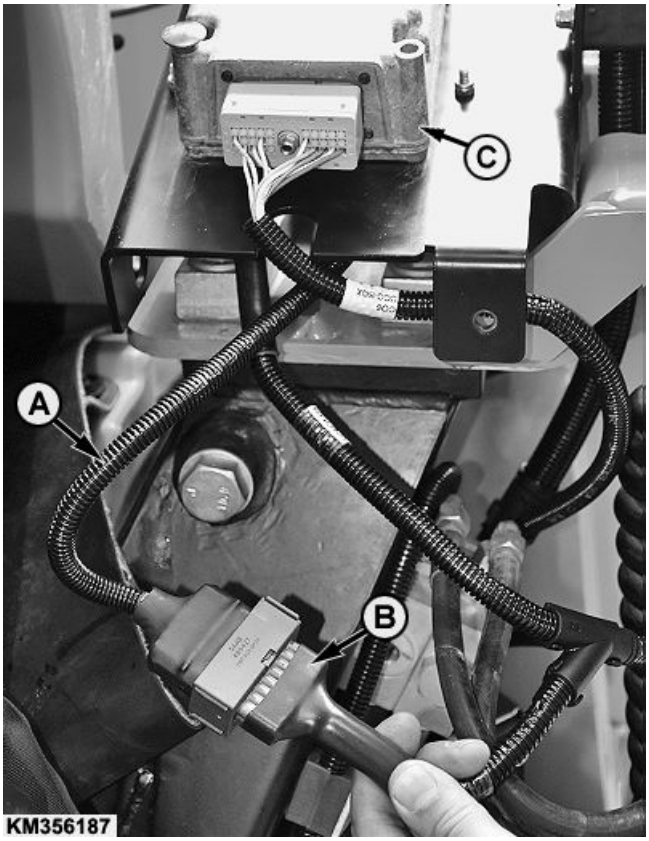

KM371481 —UN—14MAR19



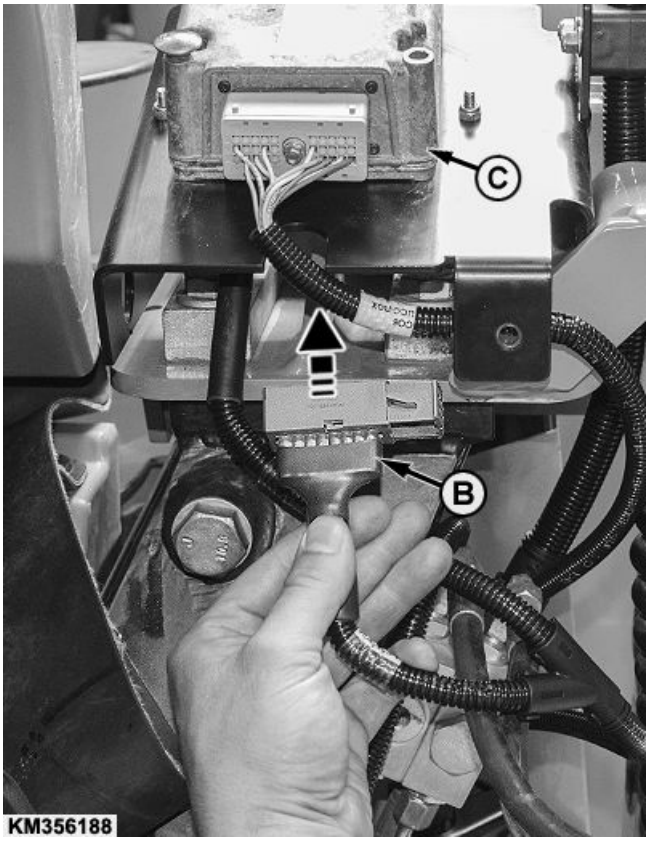

KM625426 —19—30JAN25

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km00321,1734613490177 -19-05MAR25-4/6




KM356187 —UN—20DEC24




KM356188 —UN—20DEC24

**A—Adapter Cable**

**B—Main Wiring Harness Connector**

**C—Control Unit**

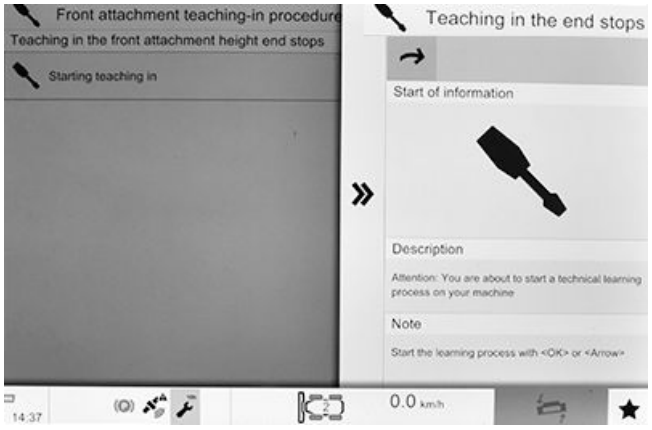
**IMPORTANT: Perform this step only for rotary harvesting units that have been equipped for attachment of a support wheel at the factory.**

*NOTE: Rotary harvesting units that have not been equipped for attachment of a support wheel at the factory have no adapter cable (A).*

10. Adapter cable (A) must be removed from Claas control unit (C) when the programming is complete. To do so, proceed as follows:
    - Remove adapter cable (A).
    - Insert main wiring harness connector (B) directly to the Claas control unit.

km00321,1734613490177 -19-05MAR25-5/6

11. After completing the programming, perform the learning process for the header.




KM625429 —19—31JAN25

km00321,1734613490177 -19-05MAR25-6/6

## Set Overlap Width (460pro and 460pro Stalkbuster™ with Support Wheel Only)

When attaching an 8-row 460pro or a 460pro StalkBuster™ Header with support wheel to a Claas forage harvester, use the serial number for the 10-row header to activate the float mode during road travel.

Therefore, the overlap width must be set in the forage harvester software.

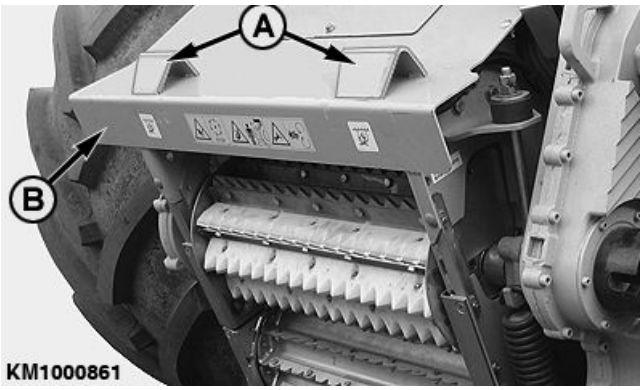
Enter the value of 1.60 m for the overlap width and confirm.



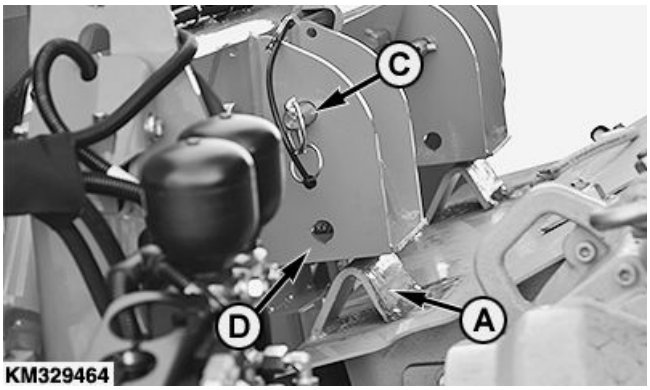

KM625428 —19—31JAN25

km00321,1738147393511 -19-04MAR25-1/1

## Attaching to Claas Forage Harvesters




KM1000861 —UN—25MAY09



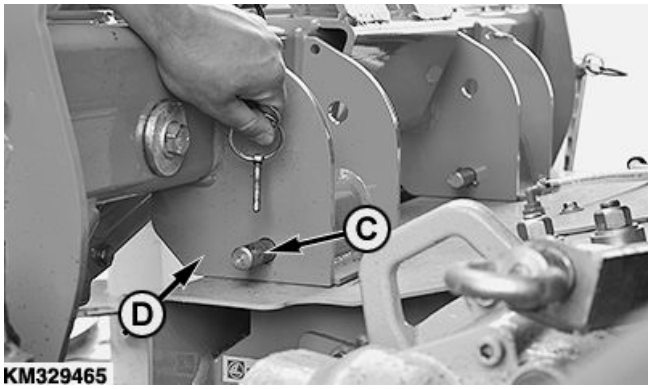

KM329464 —UN—29SEP17

1. Drive the forage harvester close to the rotary harvesting unit's frame until latching hooks (A) protrude into brackets (D) of the mounting frame.
2. Remove pins (C) on both sides.
3. Lift front shield (B) up until latching hooks (A) of the rotary harvesting unit lie in brackets (D).
4. Secure upper bearing point by installing pin (C). Lock lower bearing point by engaging lever (E).

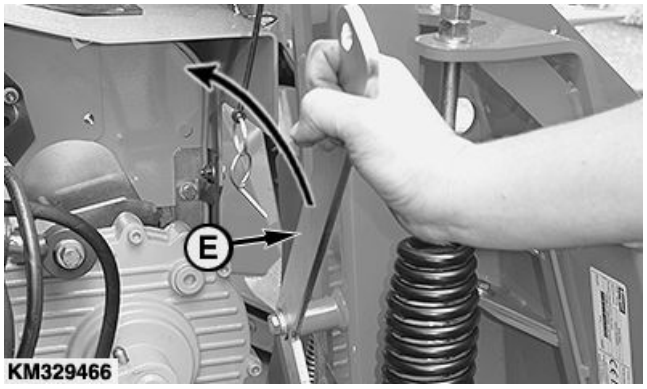
   **IMPORTANT: Retain pin (C) and lever (E) with spring locking pin.**

5. Lock jackstands (F) on the right and left side in the highest position. To do this, pull out spring-loaded pin (G) and let it re-engage when the jackstand is in its final position.

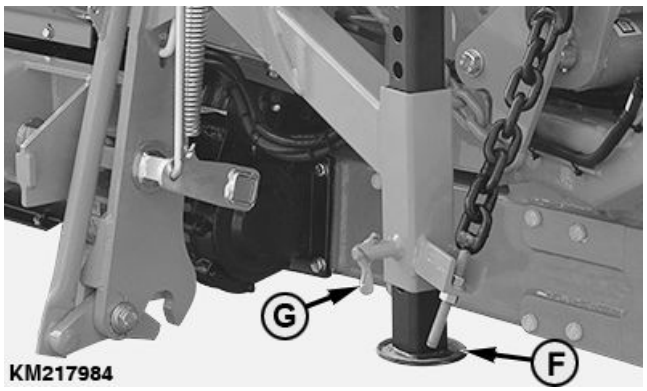
**A—Latching hooks**
**B—Front Shield**
**C—Pin**
**D—Bracket**
**E—Lever**
**F—Jackstand**
**G—Pin**




KM329465 —UN—09OCT17




KM329466 —UN—29SEP17




KM217984 —UN—15SEP14

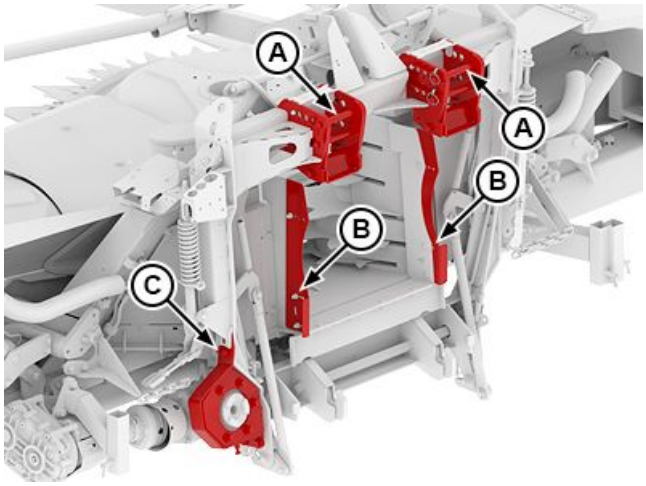
jzsgtac,1679409310243 -19-05MAY23-1/1

## Adjustable Frame (Option) - Settings

*NOTE: The adjustable frame can be set to four different positions on 460$^{pro}$ and 475$^{pro}$ headers and three different positions on 490$^{pro}$ headers.*

In order to adjust the angle of the header, the three assemblies (A), (B) and (C) must be set to the same position.

**A—Upper Brackets**
**B—Guide Plates**
**C—Lower Bracket**




KM575592 —UN—10MAY23

km00321,1683275785792 -19-05MAY23-1/4

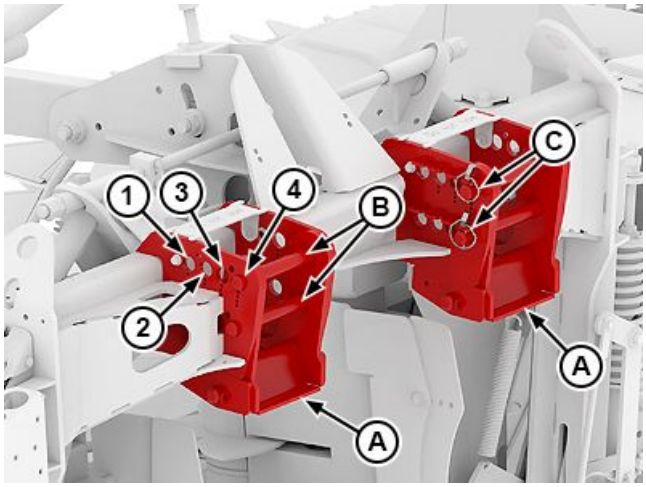
### Adjust Upper Brackets:

1. Remove pins (B).
2. Install upper brackets (A) in the desired positon 1—4.
3. Reinsert pins (B).
4. Secure pins (B) with quick-lock pins (C).

**IMPORTANT: On 490$^{pro}$ header, position (1) is blocked and must not be used.**

*NOTE: The actual installation position can be identified by punch marks.*

**A—Bracket**
**B—Pin**
**C—Quick-Lock Pin**




KM575593 —UN—10MAY23

km00321,1683275785792 -19-05MAY23-2/4

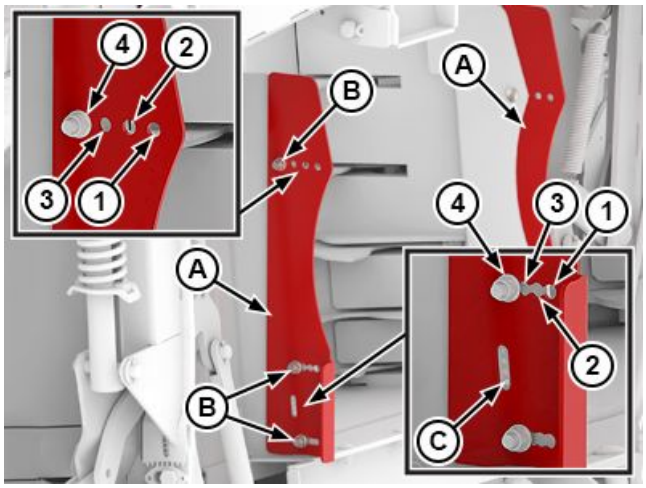
### Adjust Guide Plates:

1. Remove screws (B).
2. Install guide plates (A) in the desired position 1—4.
3. Reinstall and tighten screws (B).

**IMPORTANT: On 490$^{pro}$ header, position (1) must not be used.**

*NOTE: The actual installation position can be identified by boreholes (C).*

**A—Guide Plate**
**B—Screw**
**C—Boreholes**




KM575594 —UN—10MAY23

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km00321,1683275785792 -19-05MAY23-3/4

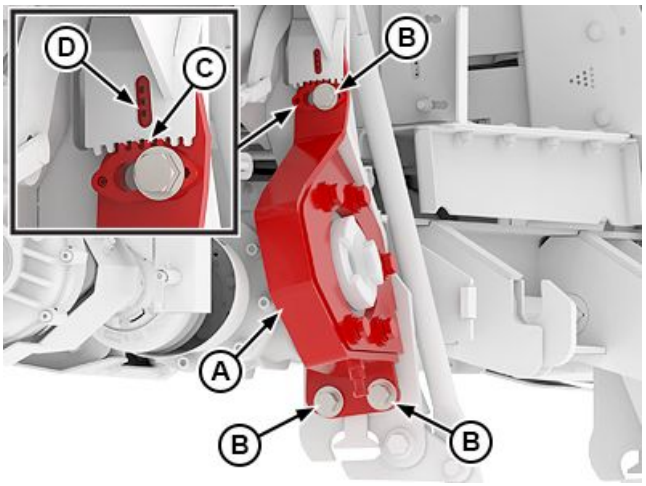
**Adjust Lower Bracket:**

1. Loosen screws (B).
2. Install bracket (A) in the desired position 1—4 using the tooth pitch (C).
3. Retighten screws (B).

**IMPORTANT: On 490$^{pro}$ header, position (1) must not be used.**

*NOTE: The actual installation position can be identified by punch marks (D).*

**A—Bracket**
**B—Screw**
**C—Tooth Pitch**
**D—Punch Marks**




KM575595 —UN—10MAY23

km00321,1683275785792 -19-05MAY23-4/4

## Rotary Harvesting Units with Multi-Speed Gearbox and Quick Coupler

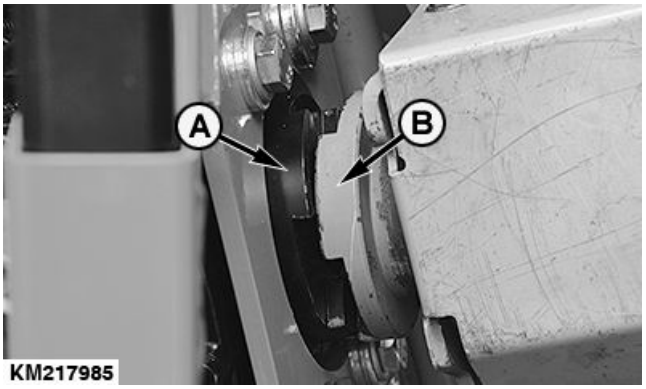
**Adjust the quick coupler (only for initial use)**

1. Make sure that attaching claw (A) on the rotary harvesting unit and attaching claw (B) on the forage harvester are in alignment.
2. If necessary, adjust the attaching claw (A) on the rotary harvesting unit.
   - Loosen screws (C).
   - Loosen lock nut (D) and adjust attaching claw (A) with set screw (E).
   - Tighten lock nut (D).
   - Tighten screws (C) to specified torque.

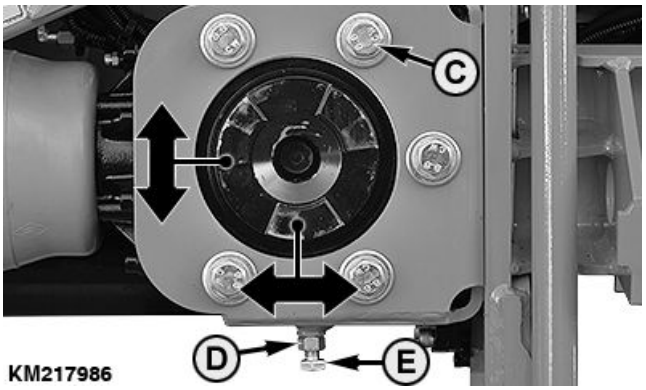
**Specification**

Screws (C) on Quick Coupler—Torque..... 240 N·m (177 lb.-ft.)

**A—Attaching Claw on Rotary Harvesting Unit**
**B—Attaching Claw on Forage Harvester**
**C—Screw**
**D—Lock Nut**
**E—Set Screw**




KM217985 —UN—15SEP14




KM217986 —UN—15SEP14

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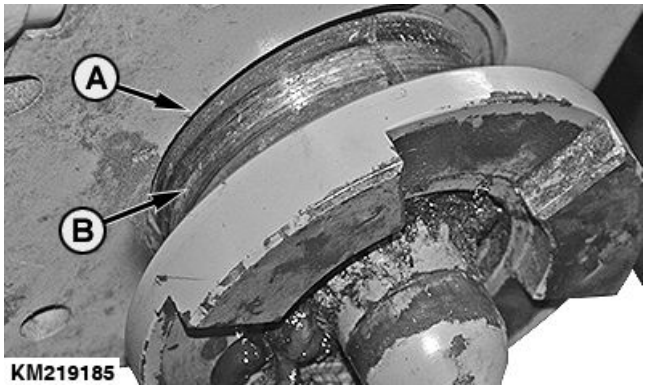
**Adjust quick coupler in axial direction**

**IMPORTANT: Make sure that groove (B) on attaching claw of the forage harvester turns freely and does not touch housing (A).**

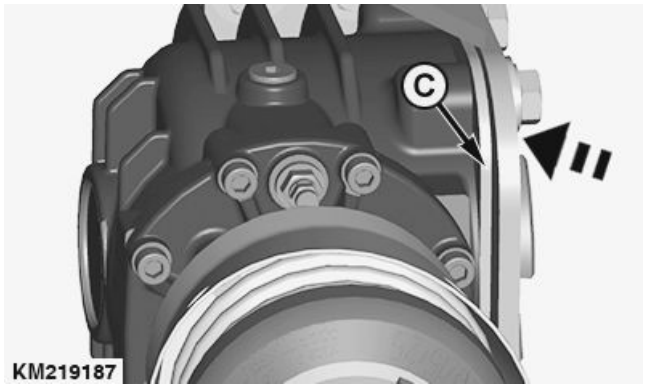
**CAUTION: Risk of fire - Incorrect setting may result in airborne sparks!**

If necessary, install spacer plate (C) **before** installing the bracket (see arrow).

**A—Housing**
**B—Groove**
**C—Spacer Plate**




KM219185 —UN—15SEP14



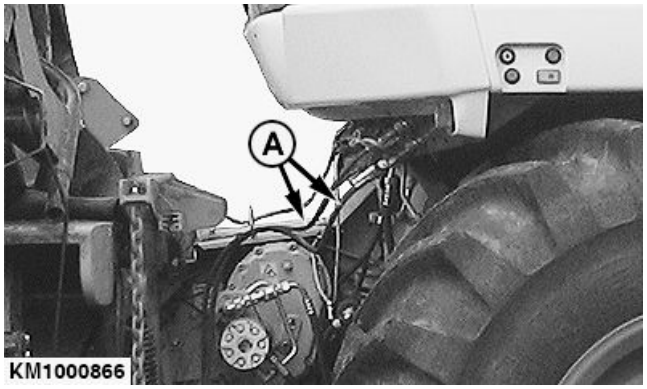

KM219187 —UN—15SEP14

jzsgtac,1679409263990 -19-22MAR23-2/2

## Connect Hydraulic Hoses

Connect hydraulic hoses (A) to forage harvester using quick couplers.

**A—Hydraulic hoses**



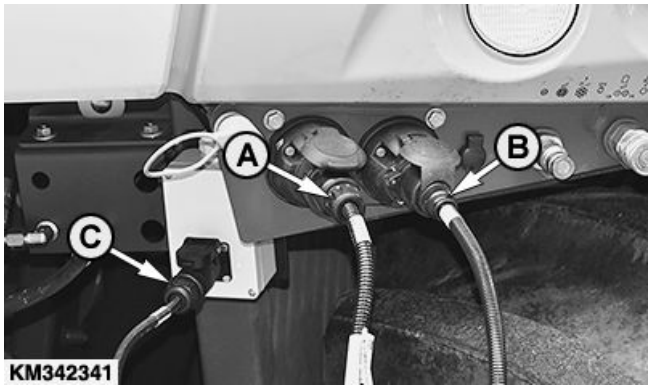

KM1000866 —UN—26MAY09

jzsgtac,1679409219586 -19-22MAR23-1/1

## Connect the Wiring Harness

Connect the connectors (A), (B) and (C) to the forage harvester.

**A—Main Wiring Harness Connector**
**B—Connector Lights**
**C—Connector for Folding the Rotary Harvesting Unit**




KM342341 —UN—18JAN18

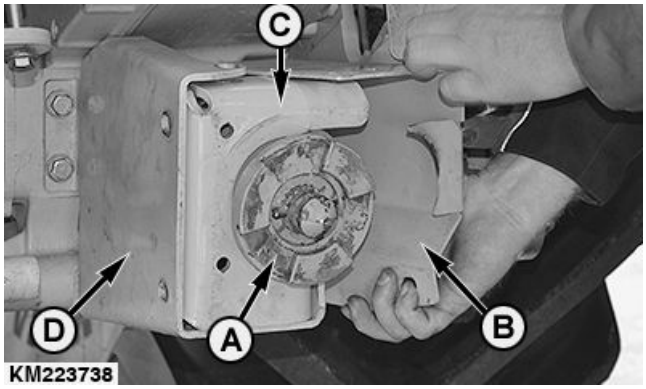
km00321,1683287215056 -19-05MAY23-1/1

## Connecting the Drive (Types 496, 500)

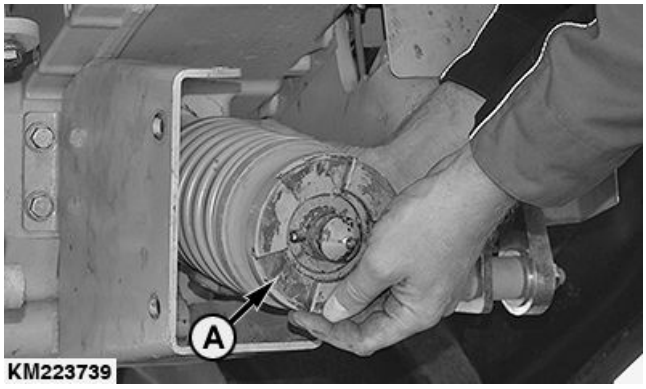
1. Completely remove claw clutch (A) from forage harvester header drive.

   To do this, remove plates (B), (C) and (D), and take off claw clutch (A).

**A—Claw clutch**
**B—Metal Sheet**
**C—Metal Sheet**
**D—Metal Sheet**




KM223738 —UN—22OCT14




KM223739 —UN—22OCT14

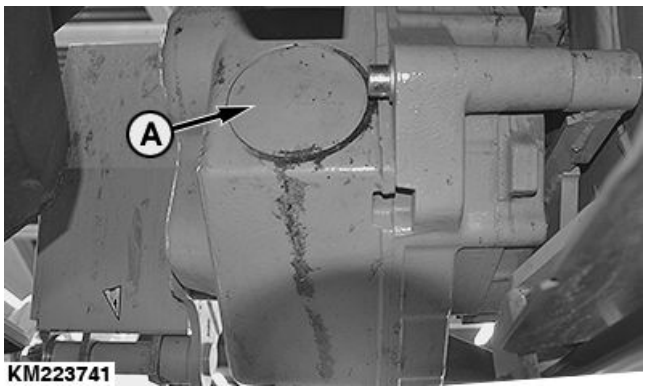
jzsgtac,1679409290918 -19-22MAR23-1/8

2. On the rear of the header drive, carefully force out the cap (A) using a 35 mm dia. shaft.

**A—Cap**




KM223740 —UN—22OCT14



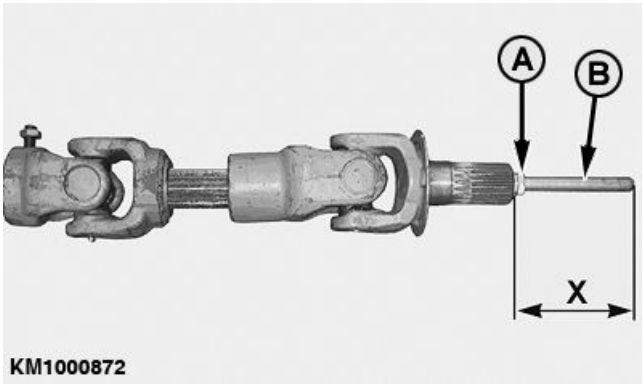

KM223741 —UN—22OCT14

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jzsgtac,1679409290918 -19-22MAR23-2/8

3. Screw threaded rod (B) into u.j. shaft, adjust to 225 mm (8.86 in.) (X) and counterlock with hex. nut (A).

**A—Hex Nut**
**B—Threaded Rod**
**X—225 mm (8.86 in.)**

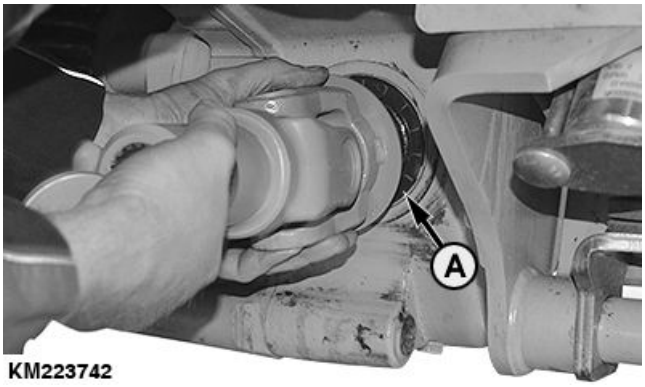



KM1000872 —UN—26MAY09

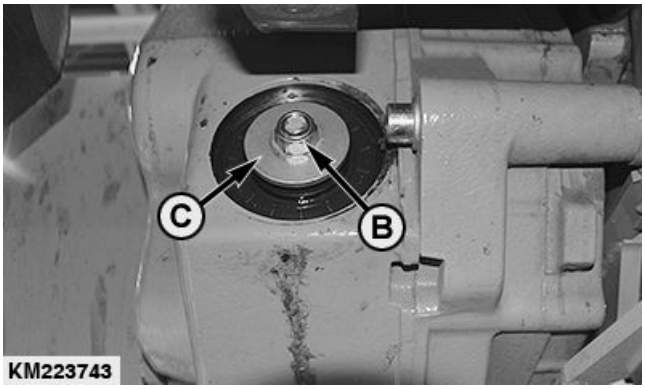
jzsgtac,1679409290918 -19-22MAR23-3/8

4. Insert the universal-jointed shaft into header drive (A) on the forage harvester.
5. Secure the universal-jointed shaft to the rear of the header drive using washer (C) and retaining nut (B).
6. Put the other end of the Universal-jointed Shaft Shield on the rotary harvesting unit transmission (D).

**A—Header Drive**
**B—Retaining Nut**
**C—Washer**
**D—Transmission**




KM223742 —UN—22OCT14




KM223743 —UN—22OCT14



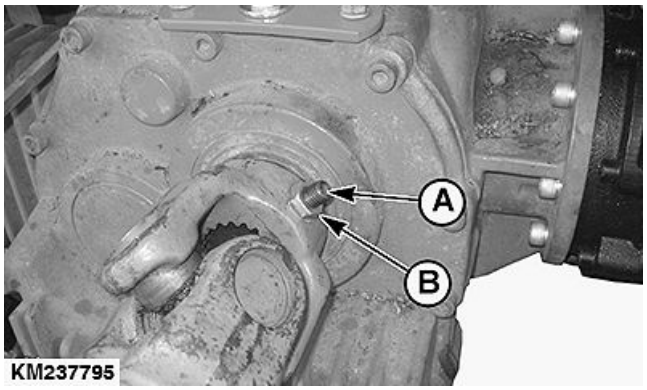

KM223744 —UN—22OCT14

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jzsgtac,1679409290918 -19-22MAR23-4/8

7. Engage locking screw (A) into groove of splined shaft. Make sure that u.j. shaft can no longer move. Tighten lock nut (B).

**A—Locking Screw** **B—Lock Nut**

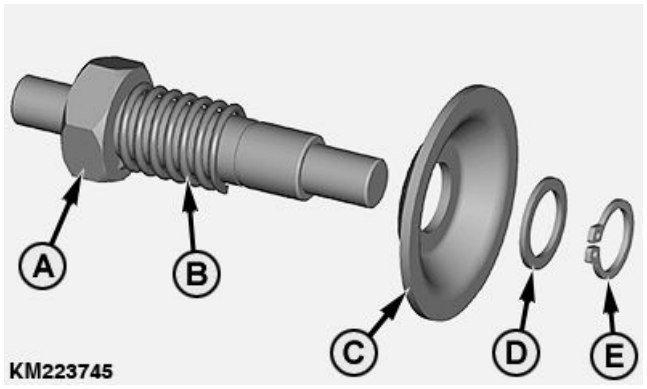



KM237795 —UN—13MAR15

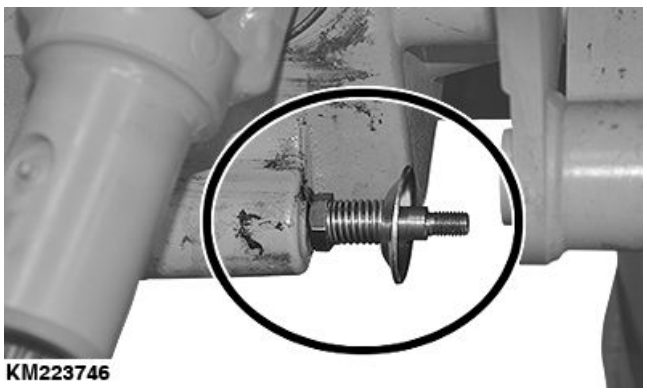
jzsgtac,1679409290918 -19-22MAR23-5/8

8. Pre-assemble the bracket and install it on the header drive of the forage harvester.

**A—Shaft** **D—Washer**
**B—Spring** **E—Snap Ring**
**C—Curved Spring Washer**




KM223745 —UN—22OCT14




KM223746 —UN—22OCT14

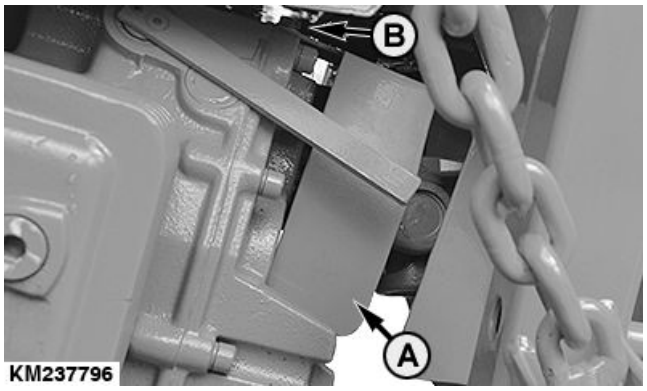
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jzsgtac,1679409290918 -19-22MAR23-6/8

*NOTE: The u.j. shaft shield consists of 2 parts.*

9. Install the universal-jointed shaft shield (A) on input transmission of the header drive and secure with screw (B).

**A—Universal-Jointed Shaft Shield**
**B—Screw**

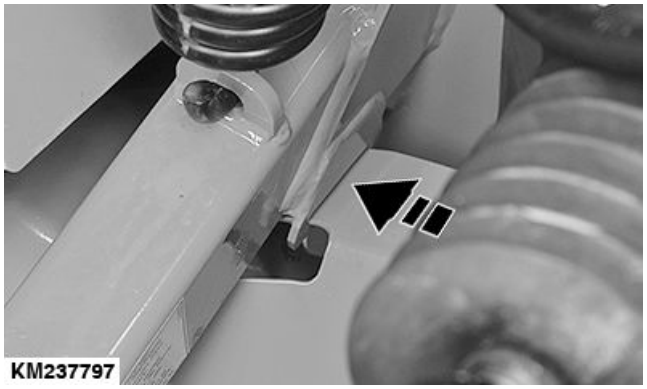



KM237796 —UN—13MAR15

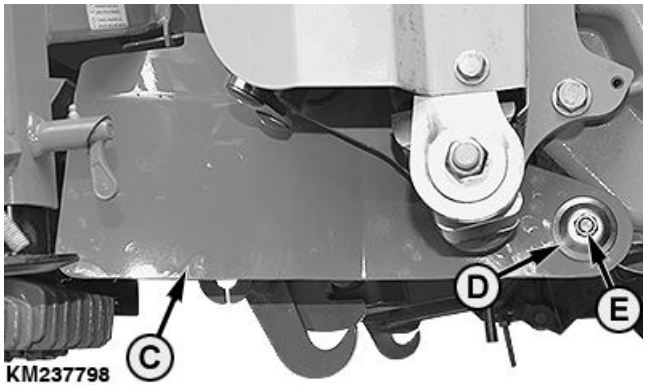
jzsgtac,1679409290918 -19-22MAR23-7/8

10. Insert the top of universal-jointed shaft shield (C) into the attaching frame (see arrow).
11. Install universal-jointed shaft shield (C) and secure with washer (D) and retaining nut (E).

**C—Universal-Jointed Shaft Shield**
**D—Washer**
**E—Retaining Nut**




KM237797 —UN—13MAR15



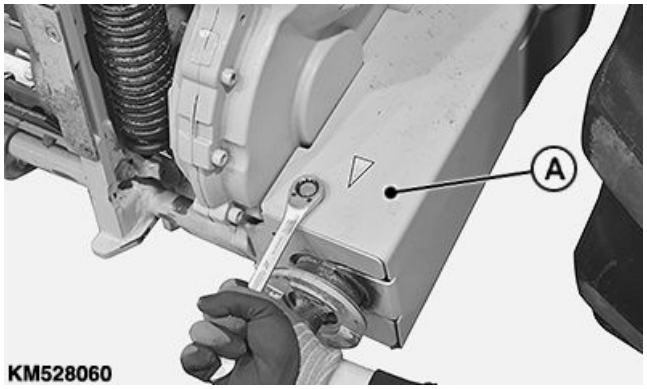

KM237798 —UN—13MAR15

jzsgtac,1679409290918 -19-22MAR23-8/8

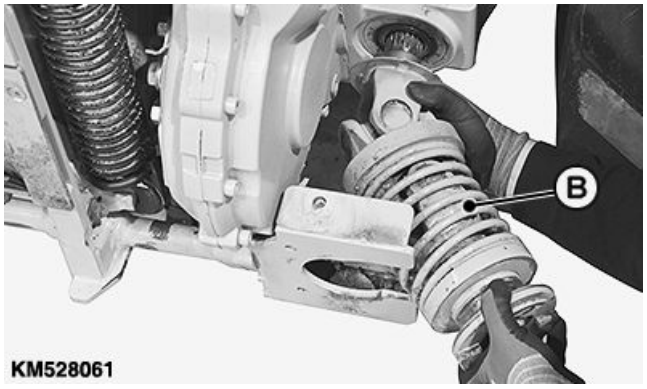
## Connecting the Drive (Types 494 and 497)

1. Remove the shield (A).
2. Remove the driveshaft (B).

**A—Shield** **B—Driveshaft**




KM528060 —UN—18JAN22



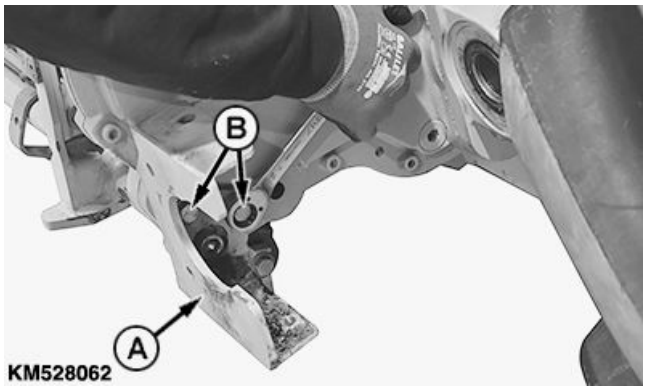

KM528061 —UN—18JAN22

jzsgtac,1679409319695 -19-22MAR23-1/8

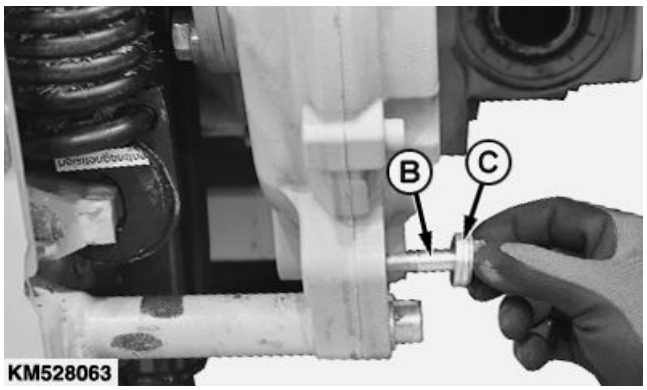
3. Unscrew bolts (B) and remove bracket (A).

**IMPORTANT: After removing the bracket (A), re-insert and fasten the screws (B). If necessary, place additional washers (C) underneath.**

**A—Bolts** **C—Washers**
**B—Bracket**




KM528062 —UN—18JAN22



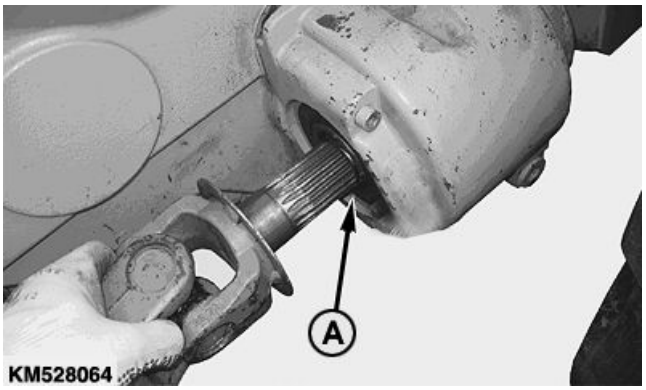

KM528063 —UN—18JAN22

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jzsgtac,1679409319695 -19-22MAR23-2/8

4. Insert driveshaft into the splined bushing (A) of the rotary harvesting unit drive on the forage harvester.

**A—Splined Bushing**

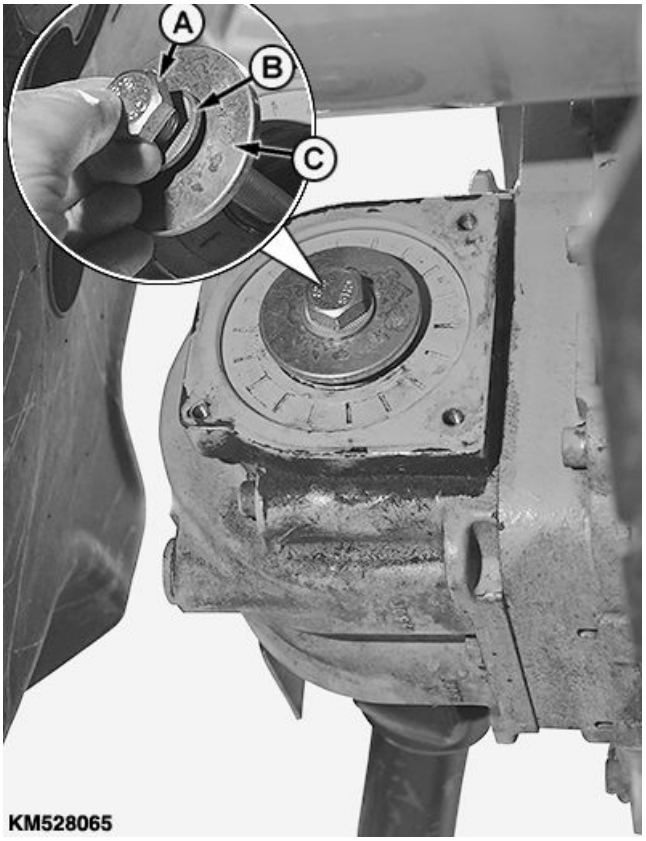



KM528064 —UN—18JAN22

jzsgtac,1679409319695 -19-22MAR23-3/8

5. Secure the driveshaft with screw (A) and washers (B) and (C).

**A—M16 x 160 Screw**
**B—Locking washer**
**C—Washer**




KM528065 —UN—18JAN22

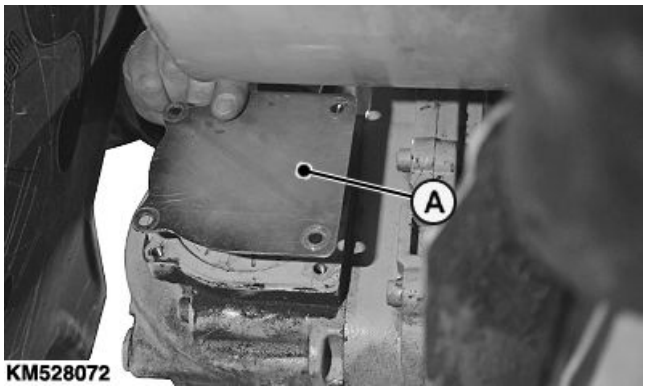
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jzsgtac,1679409319695 -19-22MAR23-4/8

6. **Only Claas type 497:**

   Replace the lid (A) with the supplied lid.

**A—Cover**



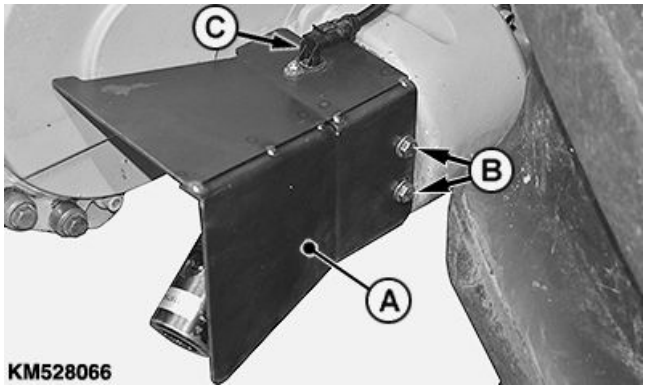

KM528072 —UN—18JAN22

jzsgtac,1679409319695 -19-22MAR23-5/8

7. Install shield (A).

*NOTE: On type 497 forage harvesters, mount the speed sensor (C) as shown.*

**A—Shield**
**B—Flange Screw, M10 x 20**
**C—Speed Sensor**

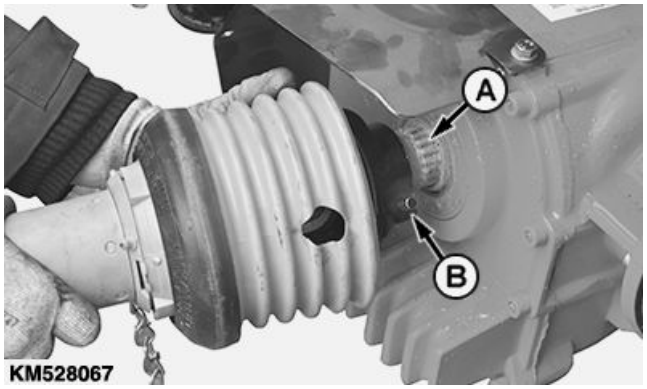



KM528066 —UN—18JAN22

jzsgtac,1679409319695 -19-22MAR23-6/8

8. Put the other end of the universal-jointed shaft on the rotary harvesting unit transmission (A).
9. Ensure that sliding pin (B) is engaged and that the universal-jointed shaft is secured.

**A—Transmission**
**B—Sliding Pin**



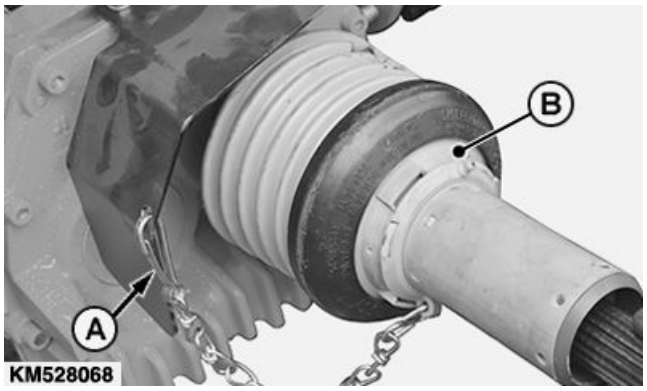

KM528067 —UN—18JAN22

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jzsgtac,1679409319695 -19-22MAR23-7/8

10. Secure shield (B) against rotation using chain (A).

**A—Chain** **B—Shield**



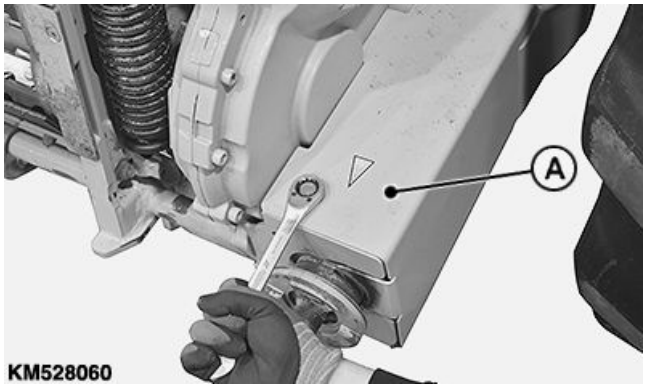

KM528068 —UN—18JAN22

jzsgtac,1679409319695 -19-22MAR23-8/8

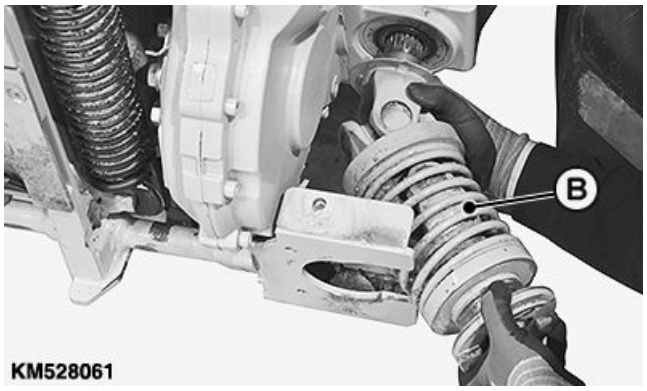
## Connecting the Drive (Types 498, 499 and 502)

1. Remove the shield (A).
2. Remove the driveshaft (B).

**A—Shield** **B—Driveshaft**




KM528060 —UN—18JAN22




KM528061 —UN—18JAN22

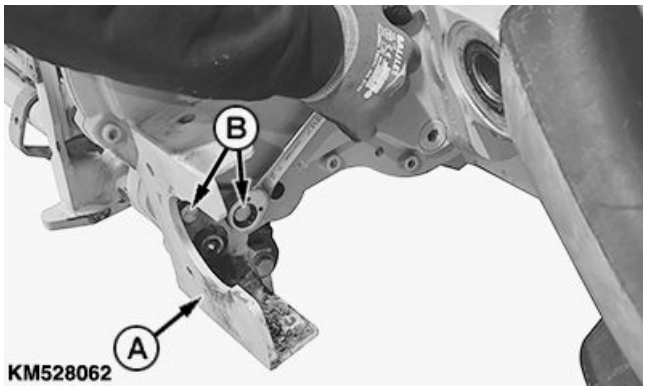
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jzsgtac,1679409328677 -19-22MAR23-1/8

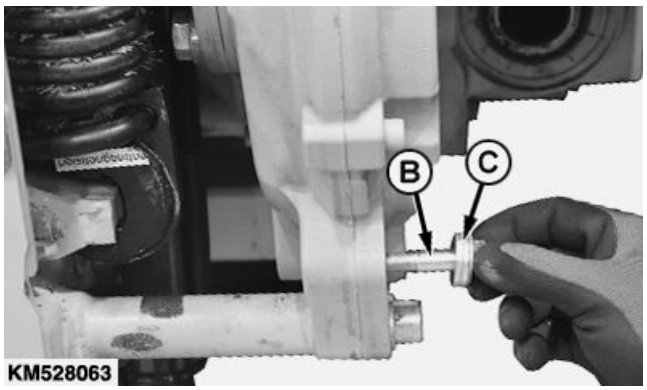
3. Unscrew bolts (B) and remove bracket (A).

**IMPORTANT: After removing the bracket (A), re-insert and fasten the screws (B). If necessary, place additional washers (C) underneath.**

**A—Bolts**
**B—Bracket**
**C—Washers**




KM528062 —UN—18JAN22

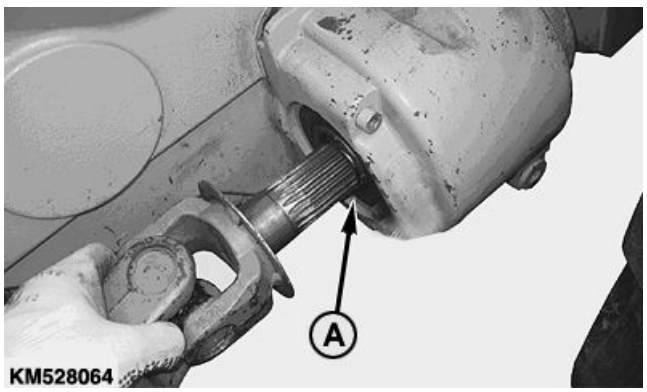



KM528063 —UN—18JAN22

jzsgtac,1679409328677 -19-22MAR23-2/8

4. Insert driveshaft into the splined bushing (A) of the rotary harvesting unit drive on the forage harvester.

**A—Splined Bushing**



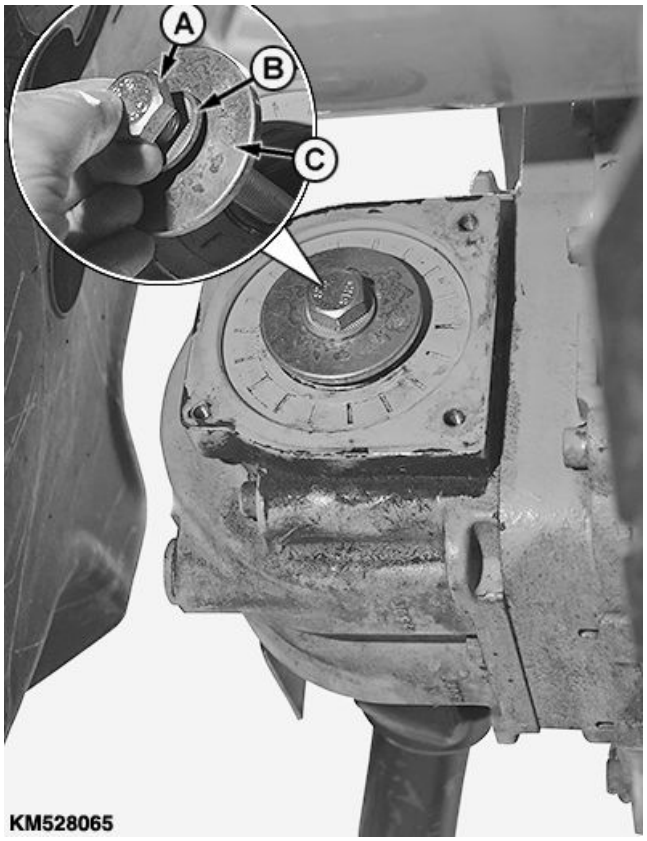

KM528064 —UN—18JAN22

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jzsgtac,1679409328677 -19-22MAR23-3/8

5. Secure the driveshaft with screw (A) and washers (B) and (C).

**A—M16 x 160 Screw**
**B—Locking washer**
**C—Washer**

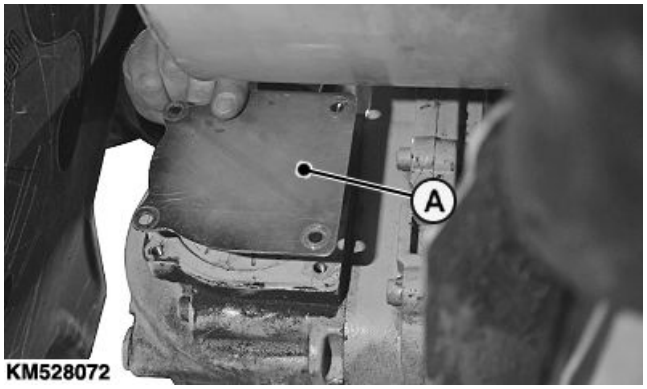



KM528065 —UN—18JAN22

jzsgtac,1679409328677 -19-22MAR23-4/8

6. Replace the lid (A) with the supplied lid.

**A—Cover**




KM528072 —UN—18JAN22

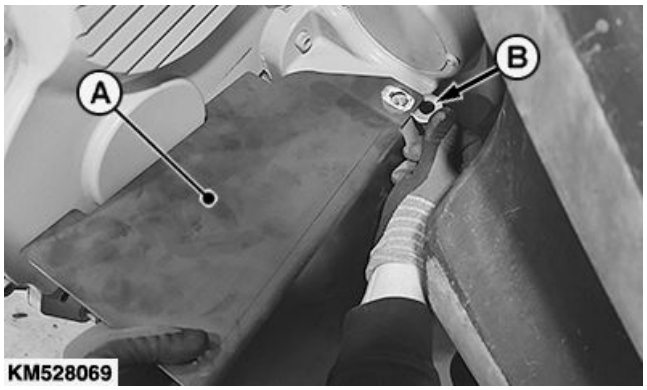
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jzsgtac,1679409328677 -19-22MAR23-5/8

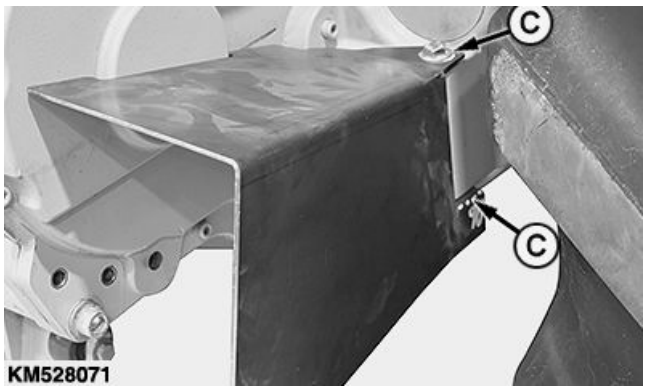
7. Install shield (A) with screws (C).

*NOTE: If necessary, place washers (B) underneath.*

**A—Shield**
**B—Washer**
**C—Screw M12 x 25 (2 pieces), locking washer 12 mm (2 pieces)**




KM528069 —UN—18JAN22

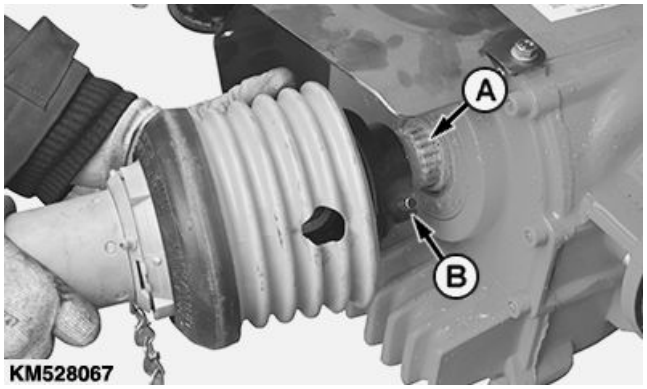



KM528071 —UN—18JAN22

jzsgtac,1679409328677 -19-22MAR23-6/8

8. Put the other end of the universal-jointed shaft on the rotary harvesting unit transmission (A).
9. Ensure that sliding pin (B) is engaged and that the universal-jointed shaft is secured.

**A—Transmission**
**B—Sliding Pin**




KM528067 —UN—18JAN22

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jzsgtac,1679409328677 -19-22MAR23-7/8

10. Secure shield (B) against rotation using chain (A).

**A—Chain** **B—Shield**




KM528068 —UN—18JAN22

jzsgtac,1679409328677 -19-22MAR23-8/8

## Replace Claas Tray with Kemper Tray

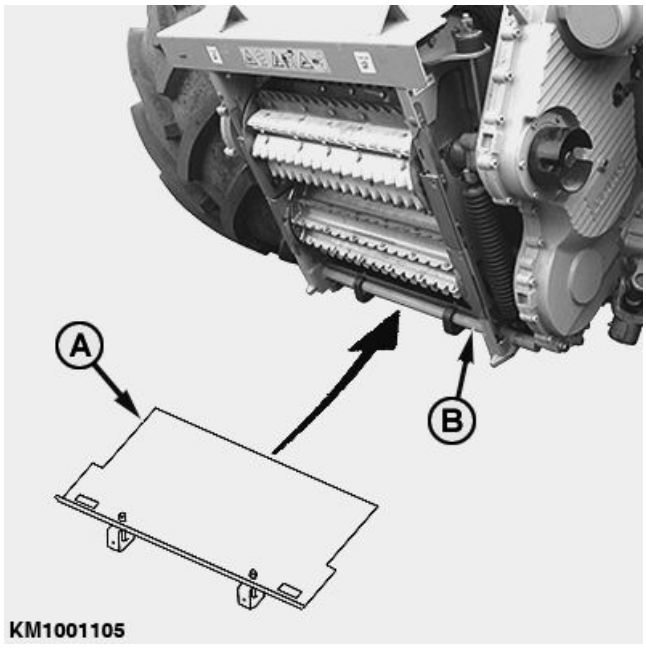
The curved CLAAS tray may impair material flow below the feed rolls. This problem will be resolved by using the straight KEMPER tray (A).

**Installation:**

Remove CLAAS tray, slide in straight KEMPER tray (A) and attach it to support shaft (B).

*NOTE: When harvesting grass, remove the KEMPER tray.*

**A—KEMPER tray** **B—Support shaft**




KM1001105 —UN—10FEB10

km00321,1682089501882 -19-02MAY23-1/1

# Attaching to a Fendt Forage Harvester

## Requirements for the Rotary Harvesting Unit Attachment 490$^{pro}$

In order to be able to operate the rotary harvesting unit 490$^{pro}$ with the Katana 650 and 850, the forage harvester must fulfil the following requirements:

**Katana 650 (Gen3):**

- Available from MY 2023
- Fendt Sales Code X431: All-wheel drive with increased torque
- Fendt Sales Code X632: Rear ballast Katana 650 for Kemper 490$^{plus/pro}$

**Katana 850 (Gen3):**

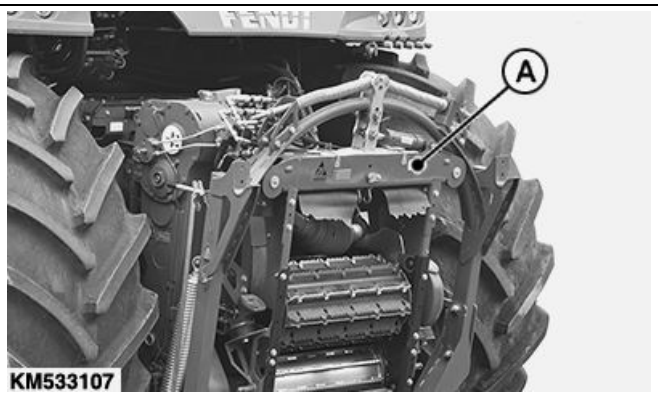
- Fendt Sales Code X633: Rear ballast Katana 850 for Kemper 490$^{plus/pro}$

km00321,1683095174810 -19-03MAY23-1/1

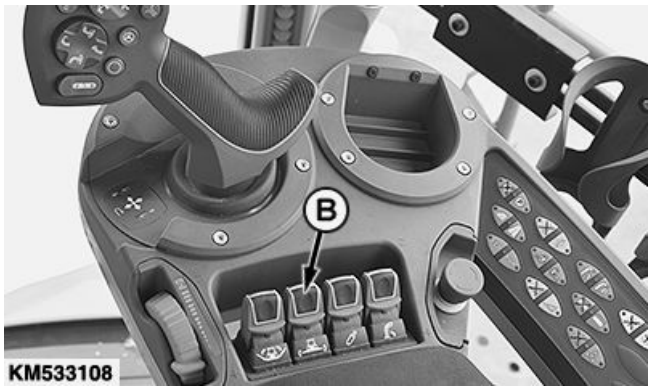
## Align the Tilt Frame

Align tilt frame (A) horizontally with switch (B).

**A—Tilt Frame** **B—Switches**




KM533107 —UN—08APR22



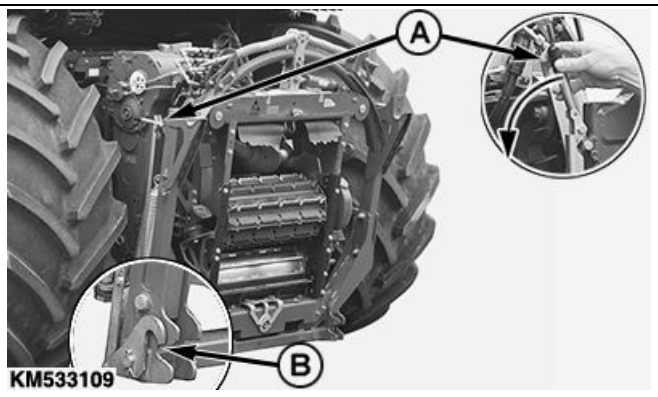

KM533108 —UN—08APR22

km00321,1682091367454 -19-24APR23-1/1

## Attach the Rotary Harvesting Unit to a Fendt Forage Harvester

1. Lower the handle (B) so that the latching hooks (B) are fully retracted.

**A—Handle** **B—Locking Hooks**



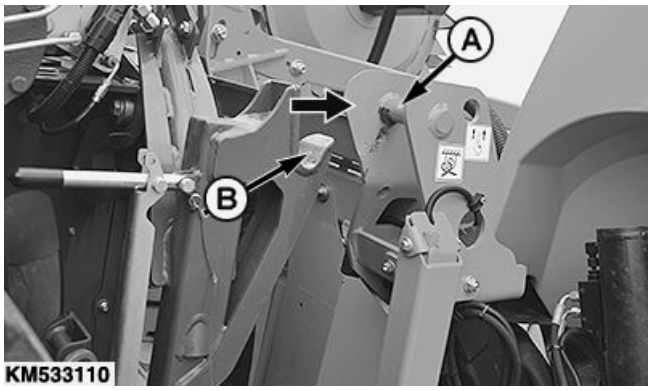

KM533109 —UN—08APR22

**Continued on next page**

km00321,1682318606088 -19-27APR23-1/5

2. Drive the forage harvester slowly to the rotary harvesting unit until the pins (A) on the right and left sides of the rotary harvesting unit are above the upper receiver jaws (B) of the tilt frame.

**A—Pins** **B—Receiver Jaws**

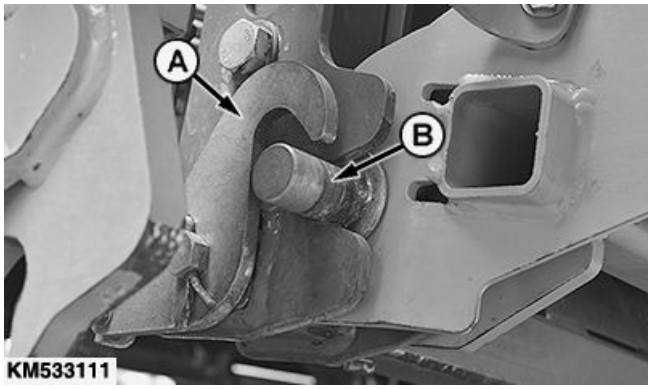



KM533110 —UN—08APR22

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3. Raise the cutterhead assembly until the pins (B) engages in the lower locking hooks (A) on the left and right.
4. Shut the engine off.
5. Set park brake.

**A—Locking Hooks** **B—Pins**




KM533111 —UN—08APR22

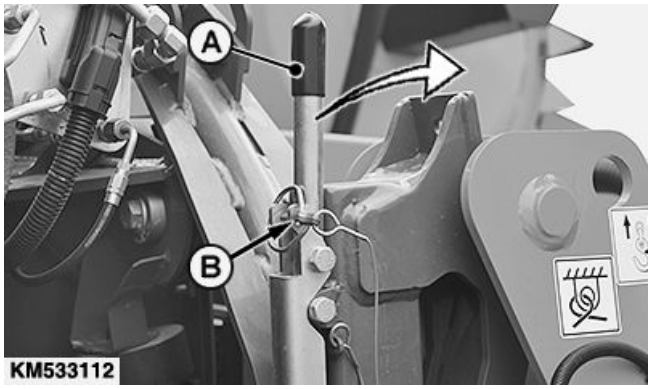
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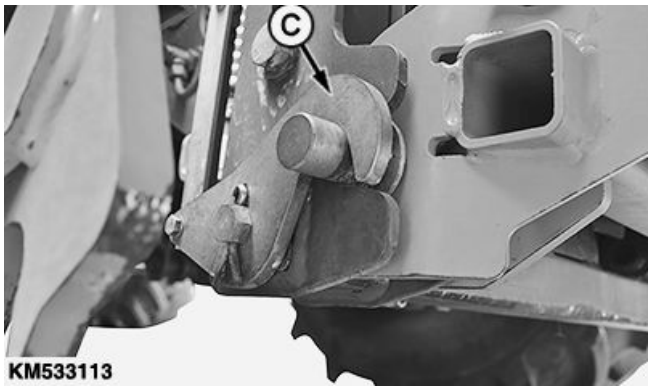
6. Raise handle in the direction of the arrow and secure with the quick-lock pin (B) as shown.

**IMPORTANT: Check that both lower locking hooks (C) lock the rotary harvesting unit correctly. Never operate the rotary harvesting unit if the hooks are not properly locked.**

**A—Handle**
**B—Quick-Lock Pin**
**C—Locking Hooks**




KM533112 —UN—08APR22

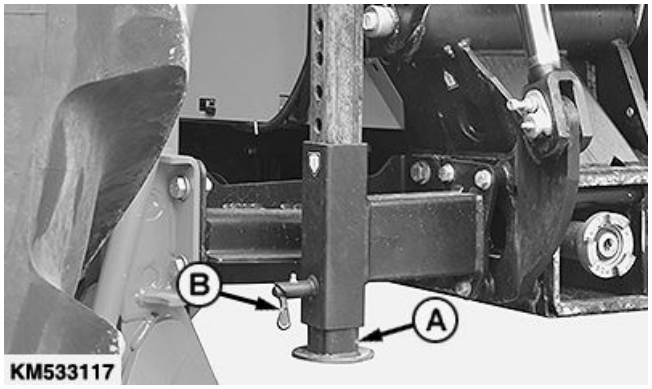



KM533113 —UN—08APR22

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7. Lock jackstands (A) on the right and left side in the highest position. To do this, pull out spring-loaded pins (B) and snap it back into place in the highest position of the jackstand.

**A—Jackstand**
**B—Pins**




KM533117 —UN—08APR22

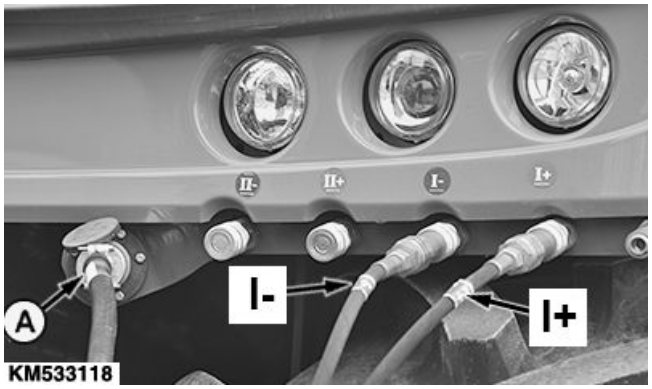
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## Connect Hydraulic Hoses and Wiring Harness

The hydraulic outlets on the forage harvester are numbered. Connect the numbered hydraulic hoses of the rotary harvesting unit to the relevant hydraulic outlets of the forage harvester.

Connect wiring harness (A) to the electrical socket of the forage harvester.

**A—Wiring Harness**

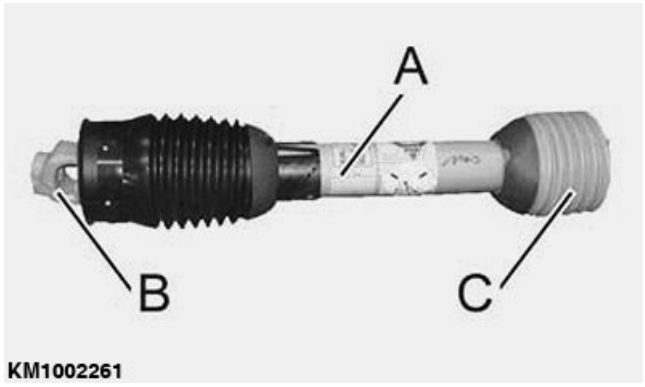



KM533118 —UN—08APR22

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## Universal-Jointed Shaft

**A—Universal-Jointed Shaft**
**B—Header End**
**C—Forage Harvester Feeder End**



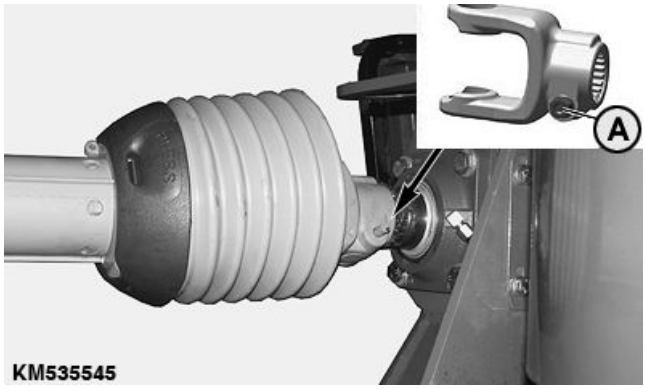

KM1002261 —UN—29MAR12

km00321,1682318804384 -19-24APR23-1/1

## Connect Universal-Jointed Shaft

1. Remove the locking screw (A).
2. Push the fork onto the splined shaft of the forage harvester.
3. Tighten the locking screw (A) to fasten.

**A—Retaining screw**




KM535545 —UN—15AUG22

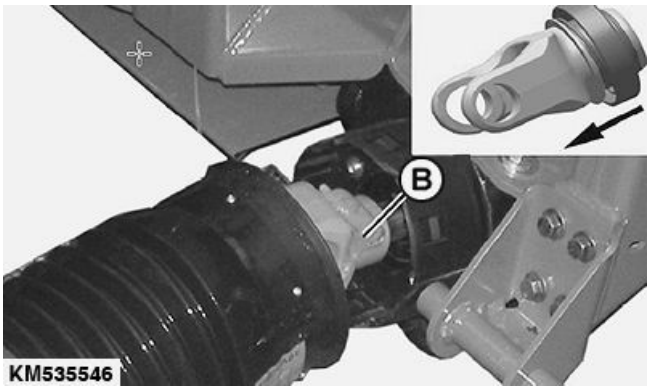
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km00321,1682319271667 -19-24APR23-1/2

4. Push the other side of the propeller shaft with the fork (B) onto the splined shaft of the rotary harvesting unit.

**IMPORTANT: Make sure that the fork (B) of the propeller shaft engages.**

**B—Fork**




KM535546 —UN—15AUG22

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## Select Hydraulic Setting

Move ball cock (A) to position for the relevant header.

**A—Ball cock**



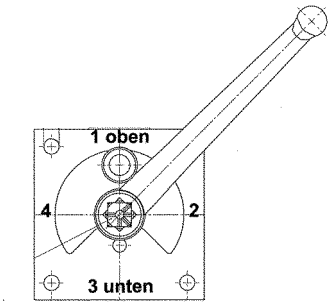

KM533119 —UN—08APR22

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### Ball cock positions

**1— Switch position for corn** **2— Switch position for grass**

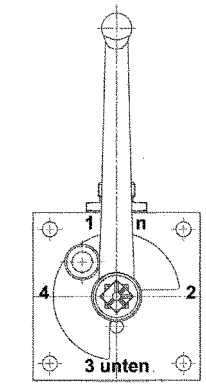
**1**




**KM535527**

KM535527 —UN—08APR22

**2**




**KM535528**

KM535528 —UN—08APR22

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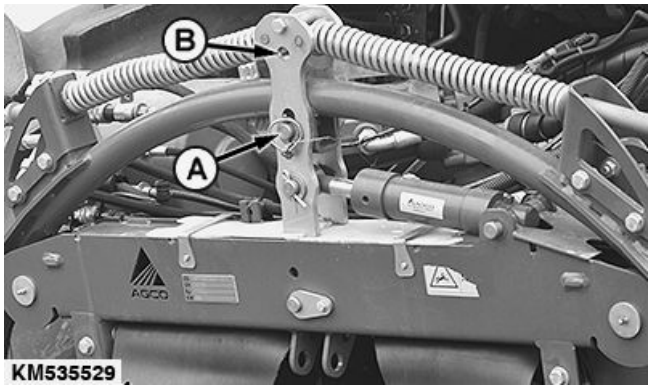
## Lateral Tilt Lock on Tilt Frame

When operating a rotary harvesting uni without height sensors, remove the pins (A) and insert it into the hole (B).

*NOTE: The tilt frame is now unlocked. The rotary harvesting unit can swing freely.*

**IMPORTANT: When driving on the road, lock the tilt frame again.**

**A—Pins** **B—Bore**




KM535529 —UN—08APR22

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## Detach the Rotary Harvesting Unit

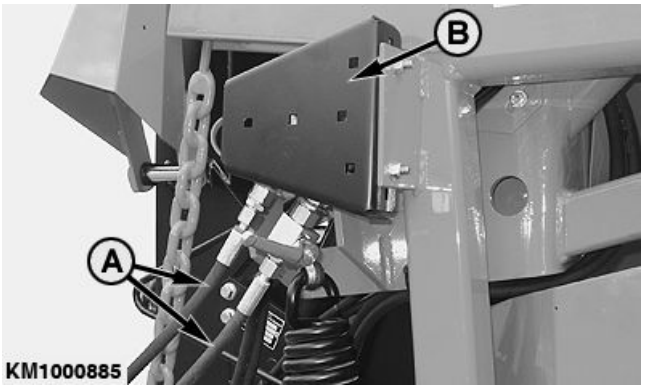
*NOTE: Fold the rotary harvesting unit before setting it down.*

1. Lower the rotary harvesting unit to the ground.
2. Shut off the forage harvester's engine, remove the key from the ignition and apply the parking brake.
3. Disconnect hydraulic hoses (A) from the forage harvester and store them in the bracket provided (B).
4. Pull off the drive shaft.

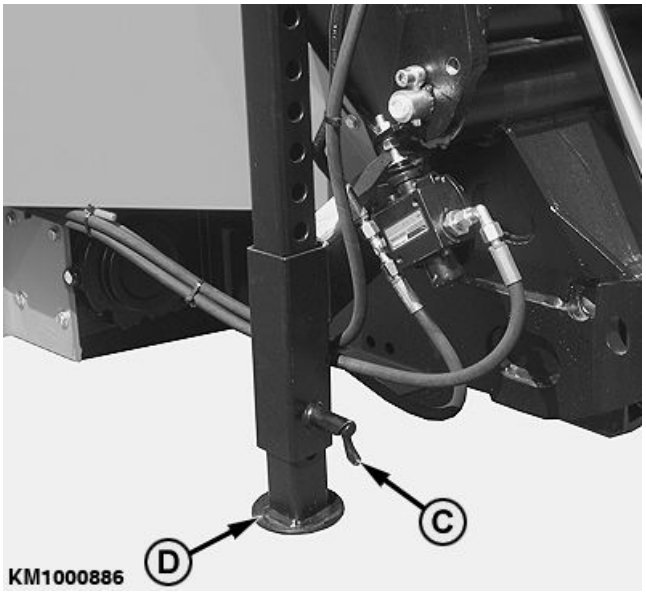
   *NOTE: Leave the rotary harvesting unit standing at a height that allows the unit to be re-attached to a forage harvester at a later time. Never select a height that is too low.*

5. Start the forage harvester and lower the rotary harvesting unit until the dividers touch the ground.
6. At left and right, lower jackstands (D) and lock them at a suitable height. To do this, pull out spring-loaded pin (C) and let it re-engage when the jackstand is at the correct height.
7. Open the retainer hooks on the attaching frame.
8. Lower the front shield further and drive out of the rotary harvesting unit's attaching frame.

**A—Hydraulic hoses**
**B—Bracket**
**C—Pin**
**D—Jackstand**




KM1000885 —UN—27MAY09




KM1000886 —UN—27MAY09

jzsgtac,1679409604034 -19-22MAR23-1/1

## Driving on Public Roads

**CAUTION: When driving on public roads or highways at night or during the day, observe local traffic regulations regarding warning devices, lighting and safety. See Section Safety.**

**IMPORTANT: Refer to the relevant forage harvester Operator's Manual to meet local government regulations when driving the forage harvester on public roads.**

Fold the outer sections for transport according to the local regulations.

**IMPORTANT: Risk of collision! To avoid damage, close the cab door of the forage harvester before folding the rotary harvesting unit.**

jzsgtac,1679409972268 -19-22MAR23-1/1

## Fold the Rotary Harvesting Unit

**CAUTION: Risk of serious injury! When unfolding or folding the rotary harvesting unit, make sure that everyone is clear of the machine.**

**When driving on public roads or highways at night or during the day, observe local traffic regulations regarding warning devices, lighting and safety. See Section Safety.**

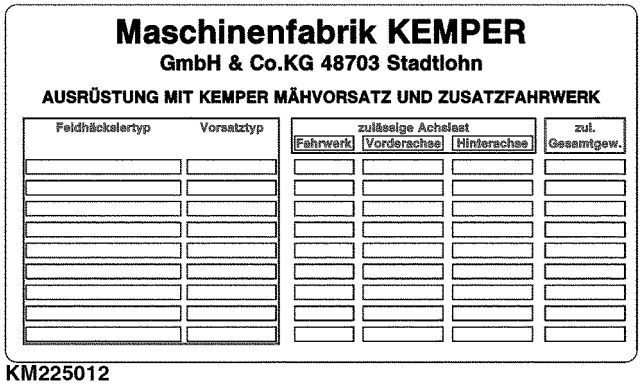
Fold the outer sections for transport according to the local regulations.

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## Apply Decal (Rotary Harvesting Units with Support Wheel)

On rotary harvesting units with a support wheel, a decal bearing the specifications is supplied (see illustration).

The decal must be applied to the forage harvester close to its type-plate.



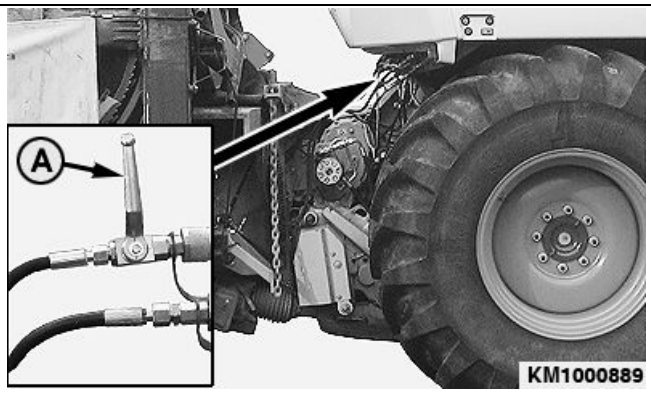

KM225012 —UN—02DEC14

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## Close Safety Relief Valve (Rotary Harvesting Units for Claas Forage Harvesters Only)

Close safety relief valve (A) when driving on public roads to prevent unintended lowering of the outer sections.

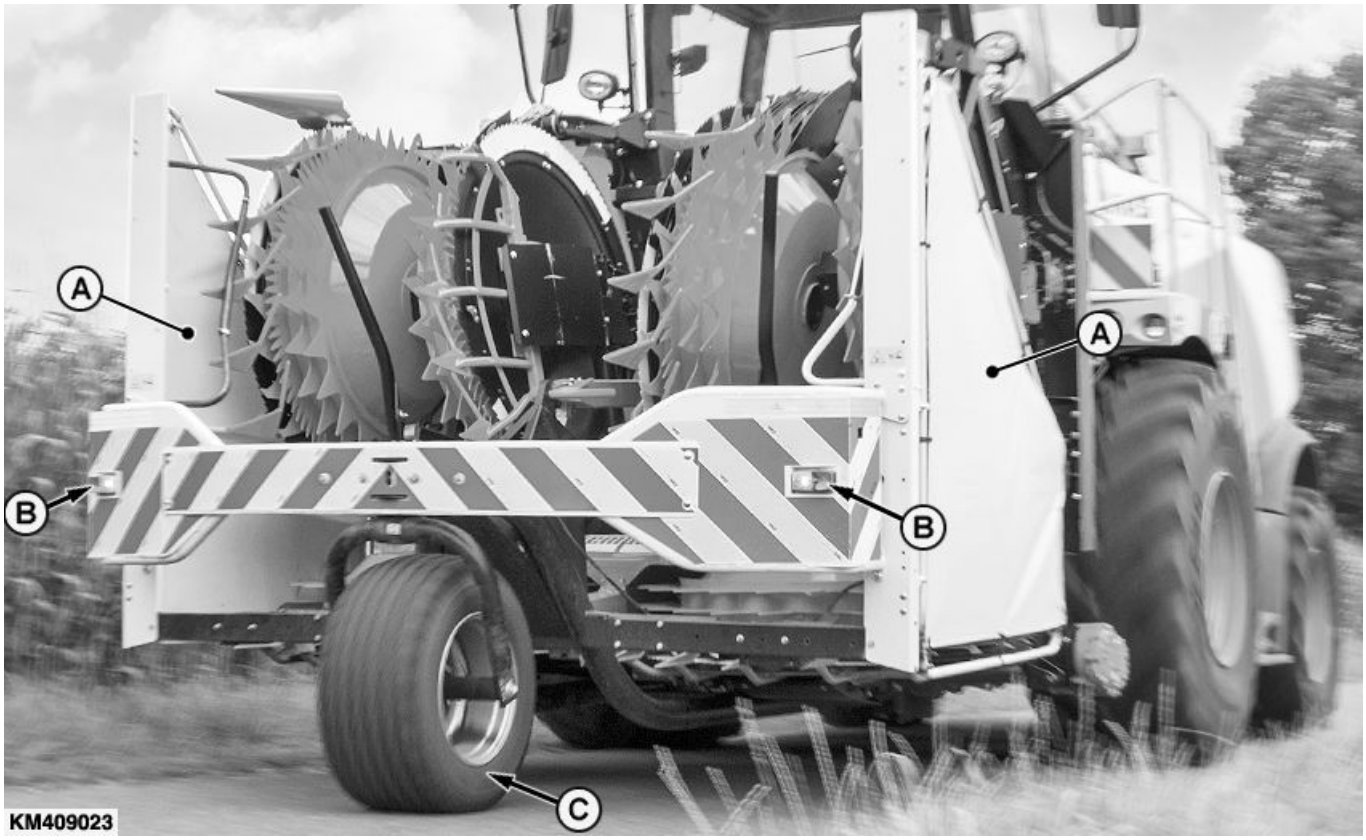
**A—Safety relief valve**




KM1000889 —UN—28MAY09

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## Driving on Public Roads (Rotary Harvesting Units with Comfort Support Wheel)




KM409023 —UN—20MAR20

**A—Protective curtains**

**B—Position Lamps/Turning Lights**

**C—Support wheel**

**IMPORTANT: Rotary harvesting units equipped for installation of the comfort support wheel (C) may be driven on public roads only if the comfort support wheel is actually attached. See also supplementary Operator's Manual for comfort support wheel 400F.**

When driving on public roads with the comfort support wheel attached, the entire area around the dividers is covered with protective cloths (A).

**Position Lamps and Turning Lights:**

As the position lamps and turning lights on the forage harvester are covered by the gathering drums in raised position, the comfort support wheel features two duplicated position lamps/turning lights (B).

jzsgtac,1679409989514 -19-22MAR23-1/1

## Driving on Public Roads (Rotary Harvesting Units without Support Wheel)

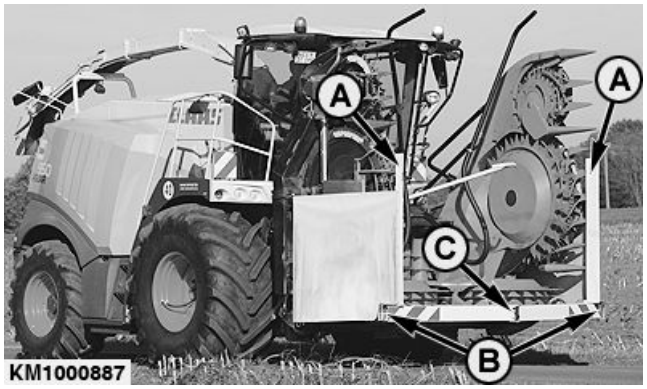
When driving on public roads the entire area around the dividers must be covered with a protective guard (A).

**Position Lamps and Turning Lights:**

As the position lamps and turning lights on the forage harvester are usually covered by the gathering drums in raised position, the accident protection device features two duplicated position lamps/turning lights (B). For the 12 V power supply use the 7-pole plug located on the right-hand side of the harvester.

**Ground Clearance:**

When driving on public roads the rotary harvesting unit must be raised so that the front accident prevention device (C) is approx. 300 mm (1 ft) above the ground surface.




KM1000887 —UN—27MAY09

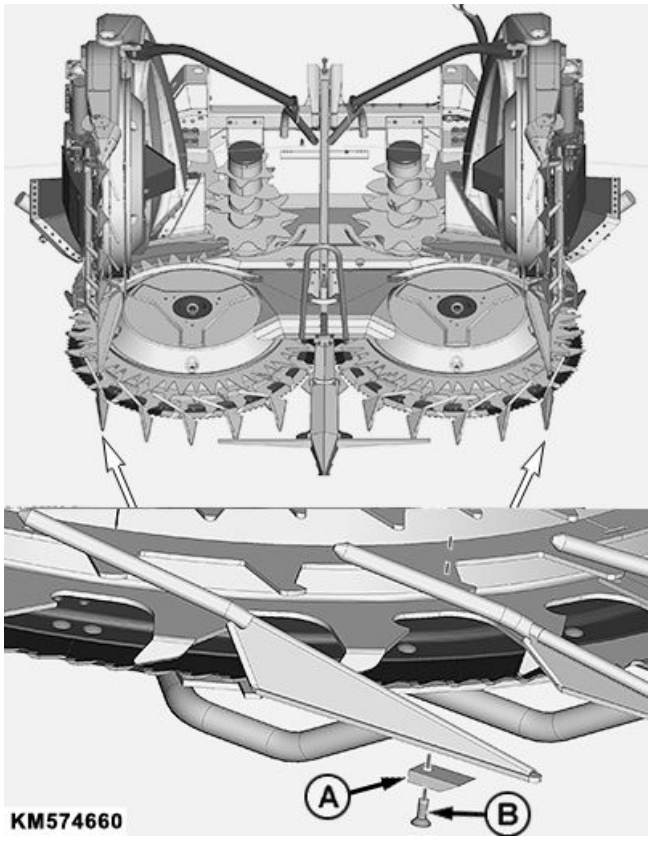
**A—Protective Guard**
**B—Position Lamps/Turning Lights**
**C—Accident Prevention Device**

km00321,1683096127305 -19-05MAY23-1/6

**Installation:**

1. After the rotors have come to a complete stop, fold up the side sections.
2. Install blocks (A) on the outer dividers.

**A—Block** **B—Screw M10 x 25**



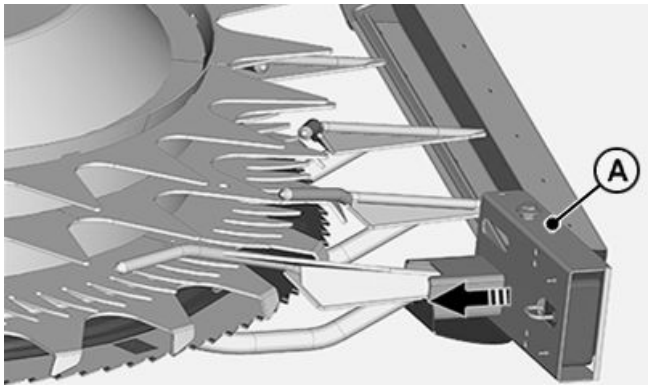

KM574660 —UN—14APR23

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3. Slide accident prevention device (A) onto the outer dividers until it engages.

**A—Accident Prevention Device**

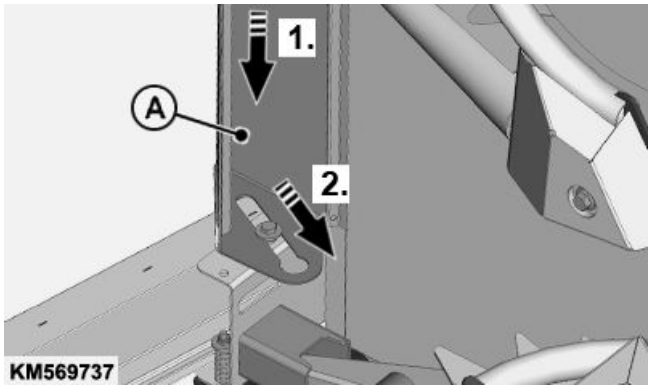



KM574662 —UN—14APR23

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4. Put curtains (A) on the accident prevention device.

**A—Curtain**



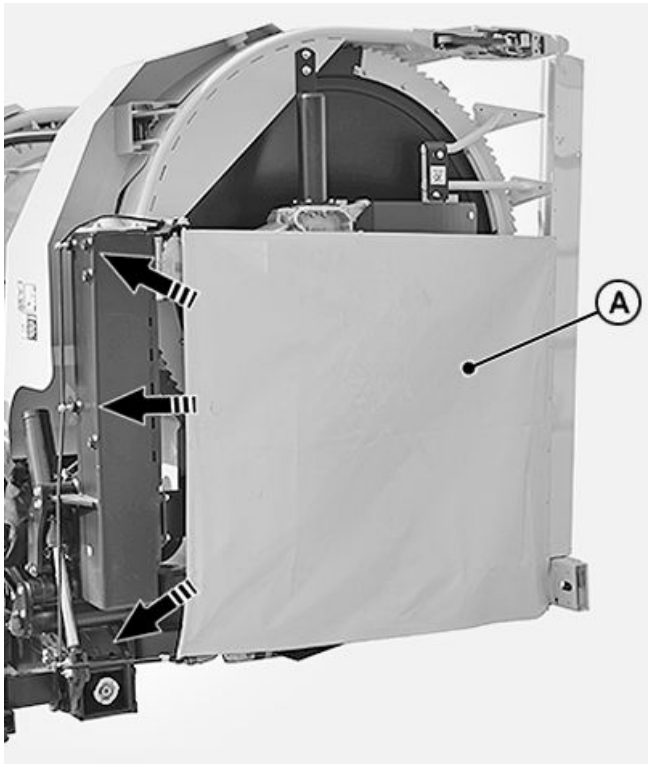

KM569737 —UN—13MAR23

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5. Fix curtains (A) using a rubber rope.

**A—Curtain**

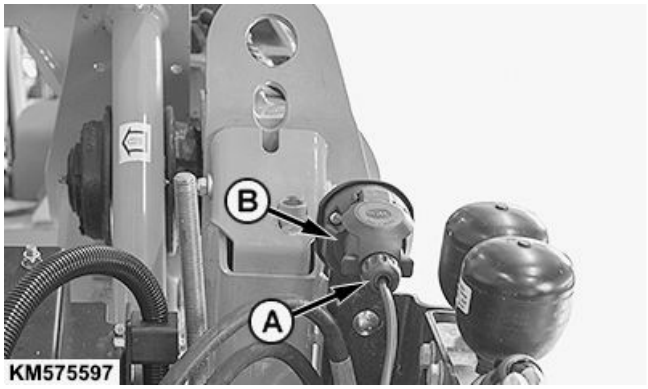



KM574663 —UN—14APR23

km00321,1683096127305 -19-05MAY23-5/6

6. Insert the connector (A) for the position lamps and turning lights in socket (B).

**A—Connector** **B—Socket Outlet**




KM575597 —UN—05MAY23

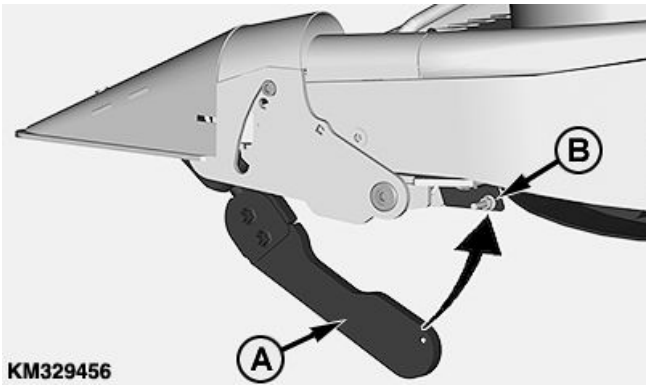
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## Set AHC-Sensor into Transport Position (460pro and 475pro Only)

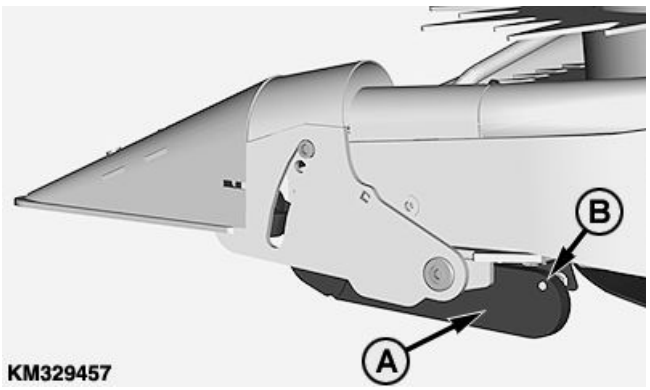
AHC-Sensors (A) must be set into transport position in order to meet maximum transport width:

- Swing AHC-Sensor (A) in direction of arrow.
- Put AHC-Sensor (A) onto bolt (B).
- Repeat on opposite side.

**A—AHC-Sensor** **B—Bolt**



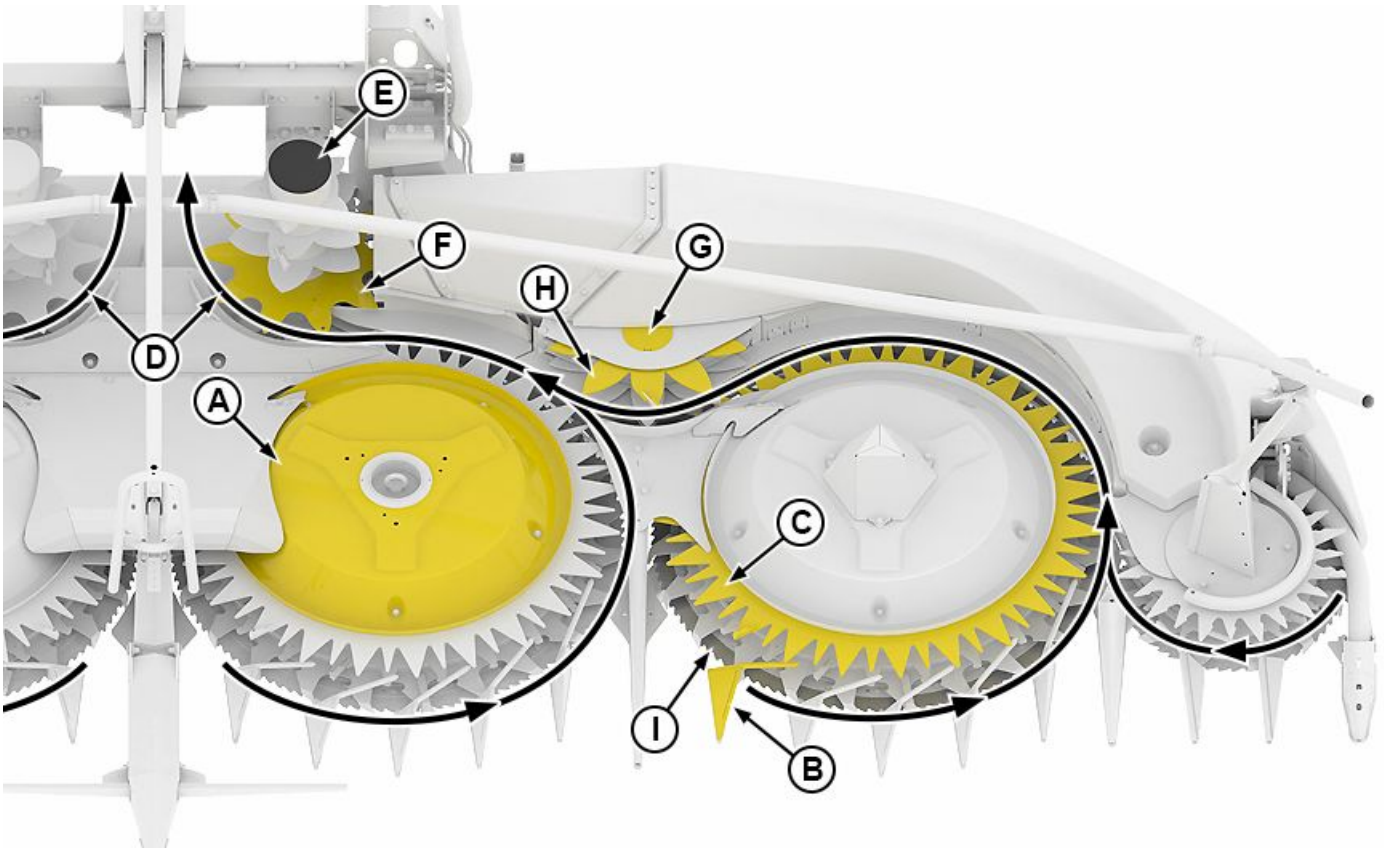

KM329456 —UN—28AUG17




KM329457 —UN—28AUG17

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## Rotary Harvesting Unit Method of Operation




KM574664 —UN—28APR23

*475pro Rotary Harvesting Unit shown*

**A—Gathering Drum**
**B—Intake Bars**
**C—Row of Teeth**
**D—Direction of Crop**
**E—Feed Drums**
**F—Feed Teeth**
**G—Cross Feed Drums**
**H—Feed Teeth**
**I— Rotary Cutter**

The rotary harvesting unit is basically to be operated in corn crop. Nevertheless, due to its capabilities, the rotary harvesting unit is able to harvest whole-crop silage, alfalfa, rape, field beans, millet, sunflowers and other stalk-type plants.

The cutting system allows the crop to be harvested from any direction. It does not matter how the row is approached - it can be approached end-on, at right angles or at an oblique angle if so desired.

Although no counterknife is used, the fast rotating rotary cutters (I) cut all the stalks within the unit's operating width. The slowly rotating gathering drums (A) pass the stalks along the intake bars (B). The stalk is seized by the row of teeth (C) as if by a gripper.

The forward motion of the gathering drums (A) forces the crop against the feed teeth (H) and so the stalks are conveyed along the guides to the feed drum (E). The cross feed drums (G) force the stalks coming from left and right end sections to pass behind the gathering drums (A). Here the stalks come into contact with the feed teeth (F).

From there, the stalks are transported in a constant and compacted stream in direction (D) to the forage harvester's feed roll.

km00321,1682682577046 -19-28APR23-1/1

## Operating the Rotary Harvesting Unit - General Use

### Starting the Forage Harvester

Starting up the forage harvester, switching on the cutterhead and rotary harvesting unit, and reversing the feed rolls should always take place with the engine running at idle speed (see forage harvester operator's manual for details). The rotary cutters do not move (due to overrun devices).

Engage forward gear at idle speed only. This avoids unnecessary wear on the clutches.

### Operating the Rotary Harvesting Unit

Once the cutterhead is turning at the correct speed, and the rotary cutters are at the appropriate speed, drive into the standing crop.

Ground speed varies depending on the density of the crop, crop type and the performance of the forage harvester.

For headland turns, maintain the rate of rotation. This avoids unnecessary wear on the rotary harvesting unit drive.

When changing forage wagon, keep the rotary harvesting unit engaged. This avoids unnecessary wear on the rotary harvesting unit drive.

jzsgtac,1679411256920 -19-22MAR23-1/1

## Clearing Blockages

If the rotary harvesting unit becomes blocked, the gathering drums can be stopped and switched to reverse.

**In the case of a blocked rotary harvesting unit:**

- Stop driving the machine.
- Move forage harvester a few meters backward.
- Briefly press button (A) and wait until the feeding unit and rotary harvesting unit stop.
- Press button (A) again and hold down until the blockage is removed.

*NOTE: The reversal takes place as long as the button (A) is held down.*

**CAUTION: Risk of serious personal injury! In no case attempt to clear blockages in the rotary harvesting unit by hand while the unit is running. First shut off the forage harvester's engine, and wait until all moving parts have come to a stop.**

**A—Multi-Function Lever**



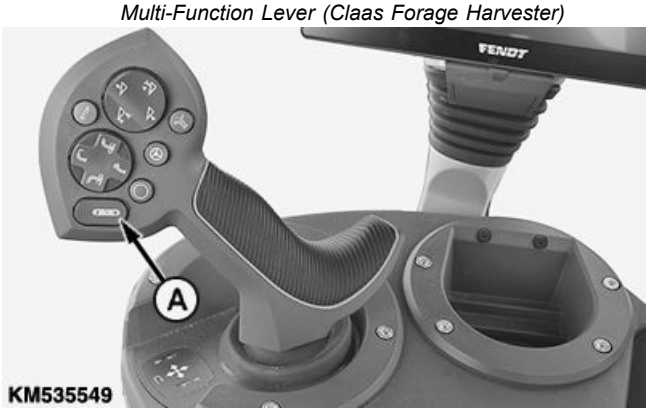

KM535548 —UN—17AUG22

*Multi-Function Lever (Claas Forage Harvester)*




KM535547 —UN—17AUG22

*Multi-Function Lever (Claas Forage Harvester)*




KM535549 —UN—17AUG22

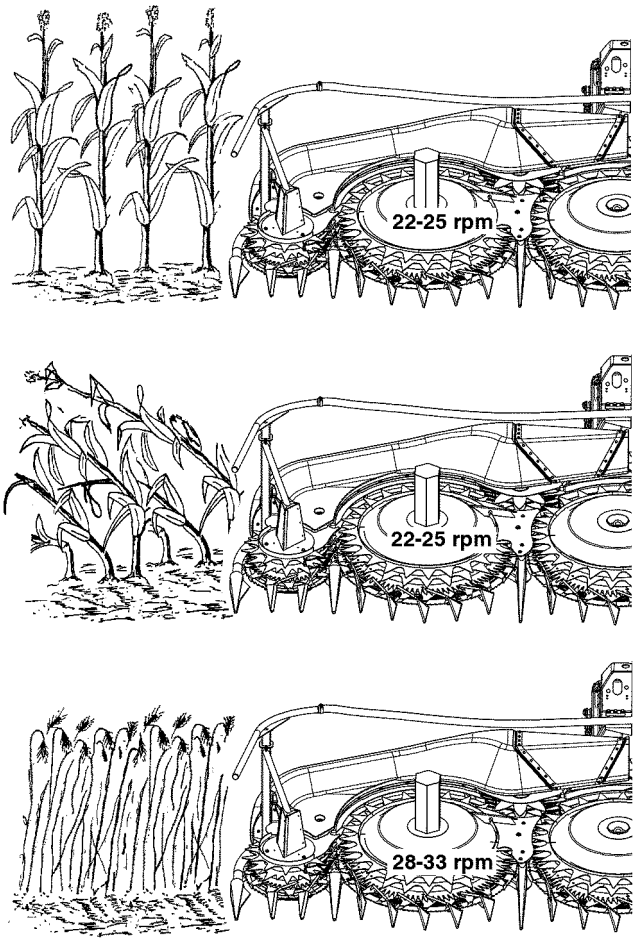
*Multi-Function Lever (Fendt Forage Harvester)*

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## Gathering Drum Operating Speeds

*NOTE: The speed at which the gathering drums operate varies depending on crop density, crop type and forage harvester version.*

*NOTE: The speed at which the gathering drums operate can be adjusted. The rotating blades operate at a fixed speed which cannot be altered.*




KM232870

KM232870 —UN—19FEB15

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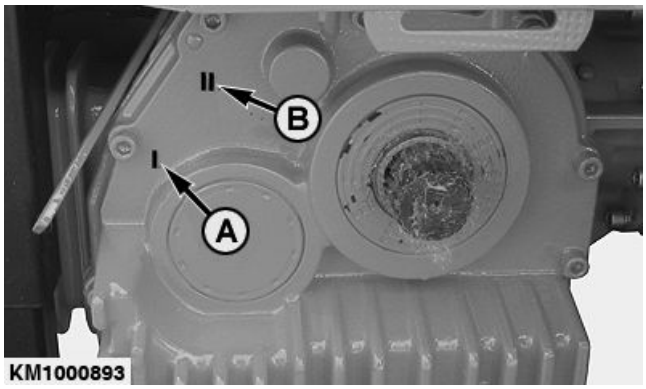
## Length-of-Cut Adjustment with Claas Forage Harvesters

On Claas forage harvesters the length-of-cut transmission and the drive speed for the rotary harvesting unit are shifted independently.

The Claas forage harvester has two gears for the rotary harvesting unit drive. For optimum operation of all lengths of cut, the Kemper rotary harvesting unit must be equipped with a two-speed gear box (option).

See forage harvester operator's manual for adjustments of the forage harvester.

On the Kemper rotary harvesting unit, 1st gear (A) and 2nd gear (B) are shifted directly at the drive case.




KM1000893

KM1000893 —UN—08JUN09

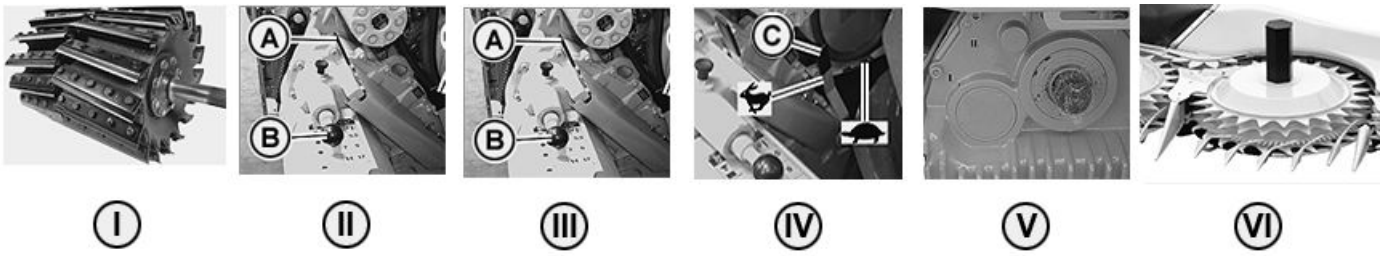
**A—1st gear** **B—2nd gear**

km00321,1682339756308 -19-24APR23-1/1

## Length of Cut and Drum Speeds with Claas Forage Harvester 830-900 (Types 492, 496, and 500)

**Cutterhead with 24 Knives (Types 492, 496, and 500)**

See tables below to determine length-of-cut adjustment.

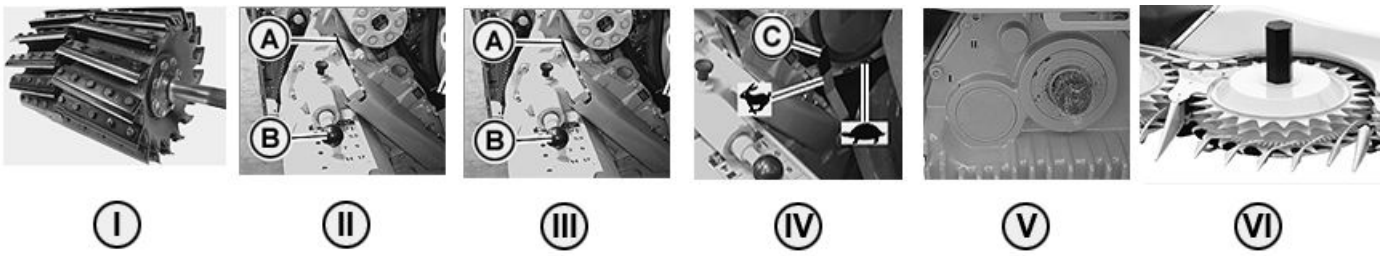



KM1000906 —UN—13MAR15

| I—Length of cut, cutterhead with 2x12 knives | II—Lever (B) position | III—Lever (A) position | IV—Lever (C) position | V—Rotary harvesting unit, gear | VI—Gathering drum speed |
|---|---|---|---|---|---|
| 4 mm | 1 | Slow | Slow | 1 | 22 |
| 5.5 mm | 1 | Fast | Fast | 1 | 26 |
| 7 mm | 2 | Slow | Slow | 2 | 27 |
| 9 mm | 2 | Fast | Fast | 1 | 26 |
| 14 mm | 3 | Slow | Slow | 2 | 27 |
| 17 mm | 3 | Fast | Fast | 2 | 33 |

jzsgtac,1679411341985 -19-03MAY23-1/2

**Cutterhead with 20 Knives (Types 492, 496, and 500)**




KM1000906 —UN—13MAR15

| I—Length of cut, cutterhead with 2x10 knives | II—Lever (B) position | III—Lever (A) position | IV—Lever (C) position | V—Rotary harvesting unit, gear | VI—Gathering drum speed |
|---|---|---|---|---|---|
| 5 mm | 1 | Slow | Slow | 1 | 22 |
| 6.5 mm | 1 | Fast | Fast | 1 | 26 |
| 8.5 mm | 2 | Slow | Slow | 2 | 27 |
| 11 mm | 2 | Fast | Fast | 1 | 26 |
| 17 mm | 3 | Slow | Slow | 2 | 27 |
| 21 mm | 3 | Fast | Fast | 2 | 33 |

jzsgtac,1679411341985 -19-03MAY23-2/2

## Length of Cut and Drum Speeds with Claas Forage Harvester 830-900 (Type 493)

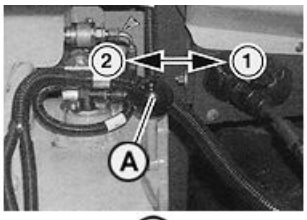
**Cutterhead with 24 knives (type 493)**

See tables below to determine length-of-cut adjustment.



KM1000907

Ⅰ




Ⅱ



Ⅲ



Ⅳ

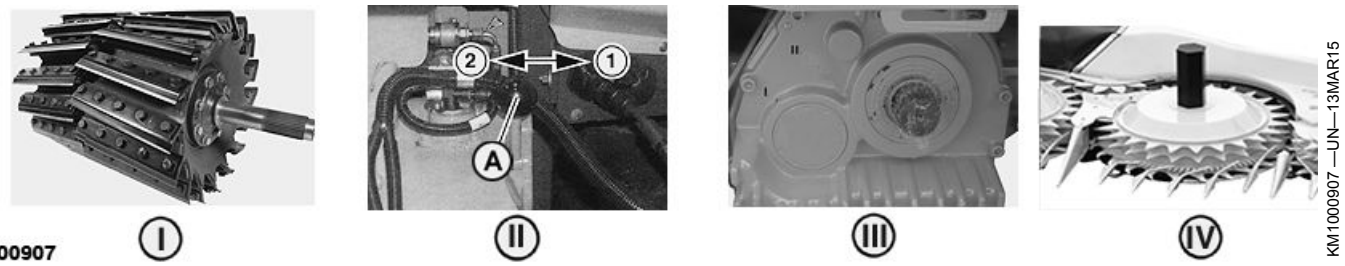
KM1000907 —UN—13MAR15

| Ⅰ—Length of cut, number of knives | | Ⅱ—Length-of-cut transmission, forage harvester | Ⅲ—Rotary harvesting unit drive | Ⅳ—Gathering drum speed |
|---|---|---|---|---|
| 2x12 knives | 2x6 knives | Gear | Gear | rpm |
| 6 mm | 12 mm | 1 | 1 | 26 |
| 7 mm | 14 mm | | 1 | 26 |
| 8 mm | 16 mm | | 1 | 26 |
| 9 mm | 18 mm | | 1 | 26 |
| 10 mm | 20 mm | | 2 | 33 |
| 8 mm | 16 mm | 2 | 1 | 26 |
| 9 mm | 18 mm | | 1 | 26 |
| 10 mm | 20 mm | | 2 | 33 |
| 11 mm | 22 mm | | 2 | 33 |
| 12 mm | 24 mm | | 2 | 33 |
| 13 mm | 26 mm | | 2 | 33 |
| 14 mm | 28 mm | | 2 | 33 |

**Continued on next page**

jzsgtac,1679411247456 -19-03MAY23-1/2

**Cutterhead with 20 knives (type 493)**




| I—Length of cut, number of knives | | II—Length-of-cut transmission, forage harvester | III—Rotary harvesting unit drive | IV—Gathering drum speed |
|---|---|---|---|---|
| 2x10 knives | 2x5 knives | Gear | Gear | rpm |
| 7.3 mm | 14.7 mm | 1 | 1 | 26 |
| 8.5 mm | 17.0 mm | | 1 | 26 |
| 9.7 mm | 19.3 mm | | 1 | 26 |
| 10.8 mm | 21.7 mm | | 1 | 26 |
| 12 mm | 24 mm | | 2 | 33 |
| 10 mm | 20 mm | 2 | 1 | 26 |
| 11.2 mm | 22.4 mm | | 1 | 26 |
| 12.4 mm | 24.8 mm | | 2 | 33 |
| 13.6 mm | 27.2 mm | | 2 | 33 |
| 14.8 mm | 29.6 mm | | 2 | 33 |
| 16 mm | 32 mm | | 2 | 33 |
| 17.2 mm | 34.4 mm | | 2 | 33 |

jzsgtac,1679411247456 -19-03MAY23-2/2

## Length of Cut and Drum Speed with Claas Forage Harvesters 930-980 (Types 494-502)

### Preselection of length of cut on forage harvesters with standard header drive

The coarse setting for length of cut is preselected using switch (A) on the forage harvester. (See forage harvester Operator's Manual.)

### 2-speed gear box

The two-speed gear box of the rotary harvesting unit is available in two versions:

- **Speed increase** for normal to long length of cut (standard)
- **Speed reduction** for short length of cut (option)

See tables below to determine length-of-cut adjustment.




**A—Switches**

jzsgtac,1679411353987 -19-05MAY23-1/1

## Cutterhead with 36 knives (Types 494-502)

### Two-speed gearbox (II) for normal to long length of cut (standard)



KM237799

(I)



(II)



(III)

KM237799 —UN—13MAR15

| I—Length of cut, number of knives | | II—Rotary harvesting unit drive | III—Gathering drum speed |
|---|---|---|---|
| 2x18 knives | 2x9 knives | Gear | rpm |
| 4 mm (0.16 in.) | 8 mm (0.31 in.) | 1 | 26 |
| 4.7 mm (0.18 in.) | 9.4 mm (0.37 in.) | 1 | 26 |
| 5.3 mm (0.21 in.) | 10.6 mm (0.42 in.) | 1 | 26 |
| 6.0 mm (0.24 in.) | 12.0 mm (0.47 in.) | 1 | 26 |
| 6.7 mm (0.26 in.) | 13.4 mm (0.52 in.) | 2 | 33 |
| 7.3 mm (0.29 in.) | 14.6 mm (0.57 in.) | 2 | 33 |
| 8 mm (0.31 in.) | 16 mm (0.63 in.) | 2 | 33 |
| 8.7 mm (0.34 in.) | 17.4 mm (0.68 in.) | 2 | 33 |
| 9.3 mm (0.37 in.) | 18.6 mm (0.73 in.) | 2 | 33 |

jzsgtac,1679411366334 -19-22MAR23-1/2

### Two-speed gearbox (II) for short length of cut (option)



KM237799

(I)



(II)



(III)

KM237799 —UN—13MAR15

| I—Length of cut, number of knives | | II—Rotary harvesting unit drive | III—Gathering drum speed |
|---|---|---|---|
| 2x18 knives | 2x9 knives | Gear | rpm |
| 2.7 mm (0.11 in.) | 5.4 mm (0.21 in.) | 2 | 20 |
| 3.3 mm (0.13 in.) | 6.6 mm (0.26 in.) | 2 | 20 |
| 4.0 mm (0.16 in.) | 8.0 mm (0.31 in.) | 2 | 20 |
| 4.7 mm (0.18 in.) | 9.4 mm (0.37 in.) | 2 | 20 |
| 5.3 mm (0.21 in.) | 10.6 mm (0.42 in.) | 1 | 26 |
| 6.0 mm (0.24 in.) | 12.0 mm (0.47 in.) | 1 | 26 |
| 6.7 mm (0.26 in.) | 13.4 mm (0.52 in.) | 1 | 26 |
| 7.3 mm (0.29 in.) | 14.6 mm (0.57 in.) | 1 | 26 |

jzsgtac,1679411366334 -19-22MAR23-2/2

## Cutterhead with 24 knives (Types 494-502)

### Two-speed gearbox (II) for normal to long length of cut (standard)



KM237799

(I)



(II)



(III)

KM237799 —UN—13MAR15

| I—Length of cut, number of knives | | II—Rotary harvesting unit drive | III—Gathering drum speed |
|---|---|---|---|
| 2x12 knives | 2x6 knives | Gear | rpm |
| 6 mm (0.24 in.) | 12 mm (0.47 in.) | 1 | 26 |
| 7 mm (0.28 in.) | 14 mm (0.55 in.) | 1 | 26 |
| 8 mm (0.31 in.) | 16 mm (0.63 in.) | 1 | 26 |
| 9 mm (0.35 in.) | 18 mm (0.71 in.) | 1 | 26 |
| 10 mm (0.39 in.) | 20 mm (0.79 in.) | 2 | 33 |
| 11 mm (0.43 in.) | 22 mm (0.87 in.) | 2 | 33 |
| 12 mm (0.47 in.) | 24 mm (0.94 in.) | 2 | 33 |
| 13 mm (0.26 in.) | 26 mm (1.02 in.) | 2 | 33 |
| 14 mm (0.55 in.) | 28 mm (1.10 in.) | 2 | 33 |

jzsgtac,1679411377162 -19-22MAR23-1/2

### Two-speed gearbox (II) for short length of cut (option)



KM237799

(I)



(II)



(III)

KM237799 —UN—13MAR15

| I—Length of cut, number of knives | | II—Rotary harvesting unit drive | III—Gathering drum speed |
|---|---|---|---|
| 2x12 knives | 2x6 knives | Gear | rpm |
| 4 mm (0.16 in.) | 8 mm (0.31 in.) | 2 | 20 |
| 5 mm (0.20 in.) | 10 mm (0.39 in.) | 2 | 20 |
| 6 mm (0.24 in.) | 12 mm (0.47 in.) | 2 | 20 |
| 7 mm (0.28 in.) | 14 mm (0.55 in.) | 2 | 20 |
| 8 mm (0.31 in.) | 16 mm (0.62 in.) | 1 | 26 |
| 9 mm (0.35 in.) | 18 mm (0.71 in.) | 1 | 26 |
| 10 mm (0.39 in.) | 20 mm (0.79 in.) | 1 | 26 |
| 11 mm (0.43 in.) | 22 mm (0.87 in.) | 1 | 26 |

jzsgtac,1679411377162 -19-22MAR23-2/2

## Adjust Gear Selection with Multi-Speed Gear Case for Claas Forage Harvesters

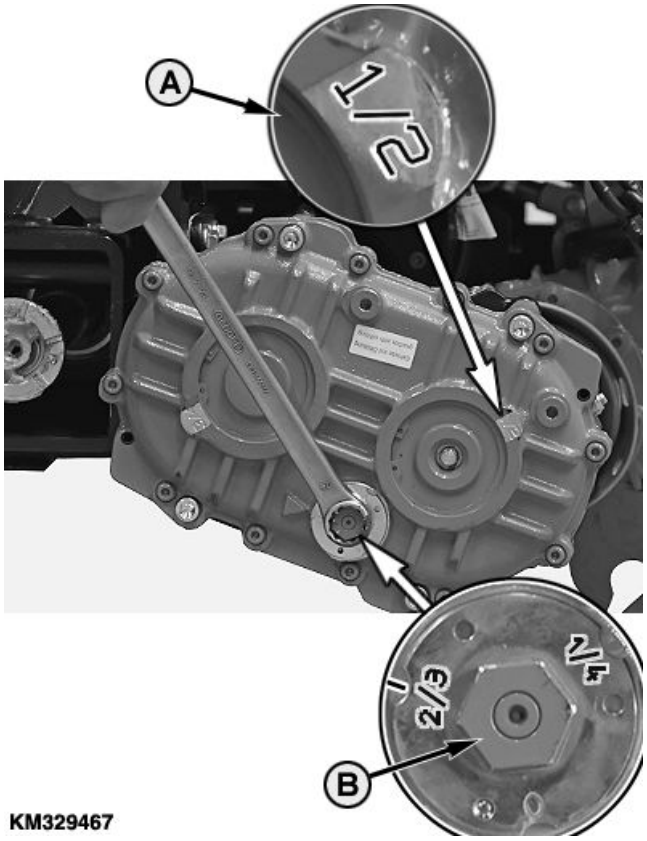
The multi-speed gear case for CLAAS forage harvesters has four gears.

The first two gears are selected by turning nut (B) on the outside of the drive.

The entire multi-speed gear case can be rotated to select two more gear positions (A).

With the gear case in the position shown, the first and second gears can be selected.

**A—First and Second Speed Positions** **B—Nut**




KM329467 —UN—10OCT17

km00321,1738070752591 -19-28FEB25-1/3

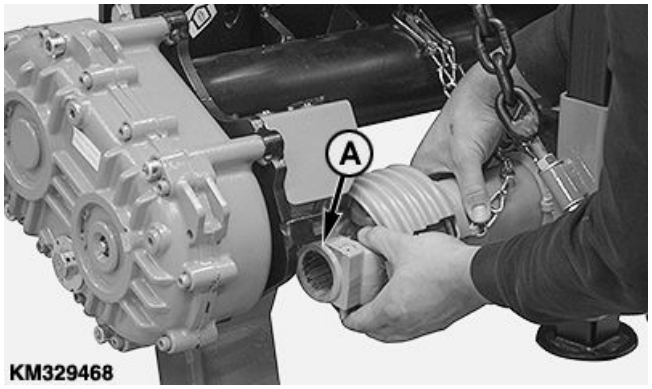
### Rotate the Multi-Speed Gear Case

To select the third and fourth speeds, the drive must be rotated around its central axis.

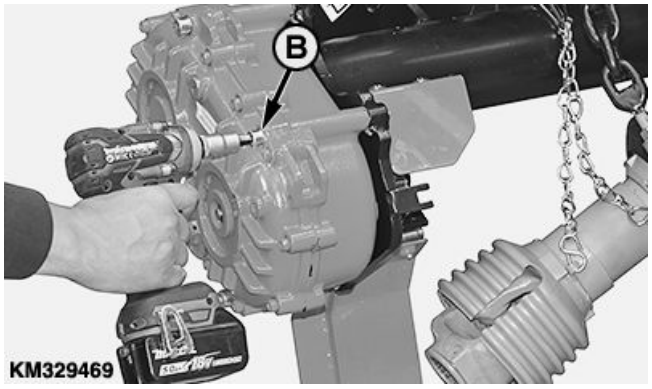
To do so, proceed as follows:

1. Remove universal-jointed shaft (A) from the gear case.
2. Unfasten socket head cap screws (B).

**A—Universal-Jointed Shaft** **B—Socket Head Cap Screw (4 used)**




KM329468 —UN—05OCT17




KM329469 —UN—05OCT17

Continued on next page

km00321,1738070752591 -19-28FEB25-2/3

3. Rotate gear case (C) by 180°.

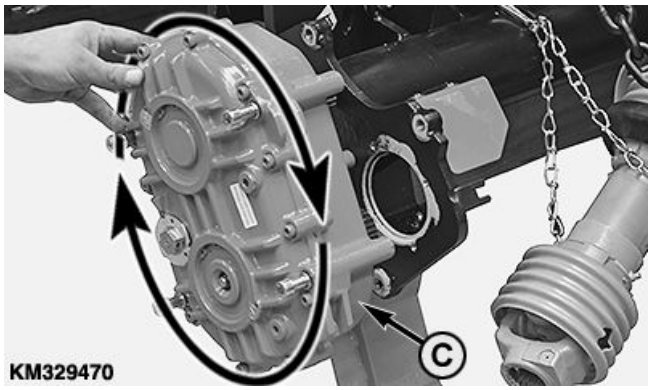
*NOTE: The gear case can be rotated without removing it.*

4. Tighten socket head cap screws (D) to specification.

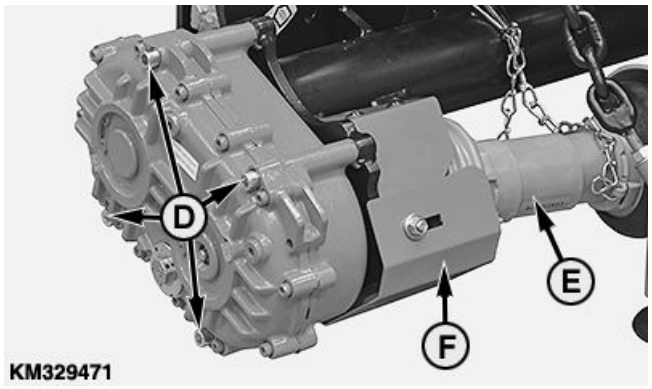
| Specification | |
|---|---|
| Gear Case, Socket Head Cap Screw—Torque | 95 N·m (70 lb-ft) |

5. Reinstall universal-jointed shaft (E) and shield (F).

**C—Gear Case**
**D—Socket Head Cap Screw (4 used)**
**E—Universal-Jointed Shaft**
**F—Shield**




KM329470 —UN—05OCT17




KM329471 —UN—05OCT17

km00321,1738070752591 -19-28FEB25-3/3

## Lengths of Cut and Gear Selection with Multi-Speed Gearbox for Claas Forage Harvesters

*NOTE: The grayed out lengths of cut may under certain circumstances lead to problems in the material flow.*

See table below to determine length-of-cut adjustment.

| | Lengths of cut in mm | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | Gear selection (4 gears) | | | | | | | | | | | | | | |
| **20-knife cutterhead** | - | - | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| **24-knife cutterhead** | - | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| **28-knife cutterhead** | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | - | - |
| **36-knife cutterhead** | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | - | - | - | - | - |

Claas Forage Harvesters of types 498, 499 and 502 equipped with a variable header drive can change speed within the cutting length settings. In order to prevent very excessive drum speed, the 4th gear of the multi-speed transmission cannot be used here.

*NOTE: When the 3rd gear is operated with maximum variable speed, this corresponds with the 4th gear.*

**IMPORTANT: The auto mode with the variable header drive only works in 3rd gear.**

jzsgtac,1679411330969 -19-26JUL23-1/1

## Harvesting

Before the harvest, do the following:

- Unfold the rotary harvesting unit
- Adjust the feed bars
- Adjust the speed at which the gathering drums operate

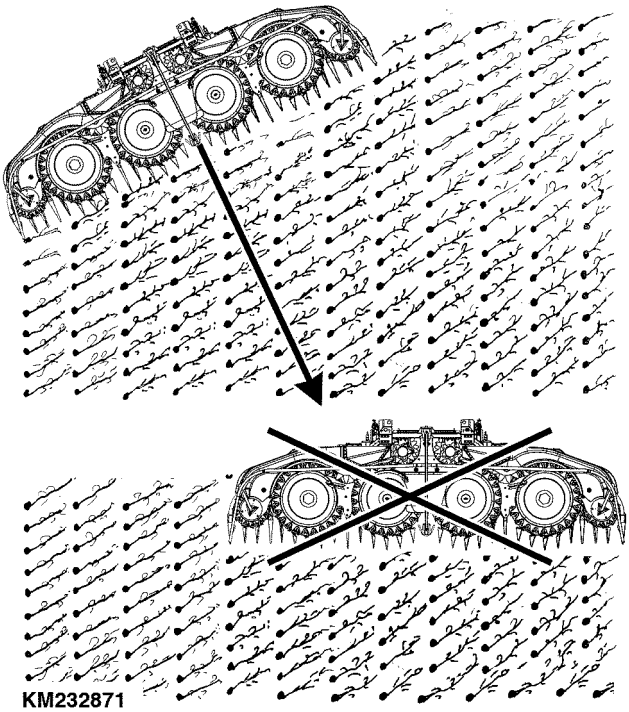
**IMPORTANT: Avoid unnecessary wear at the clutches. Always select forward gear from the idle setting.**

1. Run the engine of the forage harvester at idle speed.
2. Switch on the rotary harvesting unit.
3. Wait until the gathering drums and rotating blades have reached their operating speed.

   **IMPORTANT: In most cases, it is best to approach the crop at right angles to the direction it is lying in. This usually results in the most even flow of crop.**

   **IMPORTANT: Observe the flow of crop at all times.**

4. Drive into the crop at a relatively high speed in order to achieve a quick flow of crop.



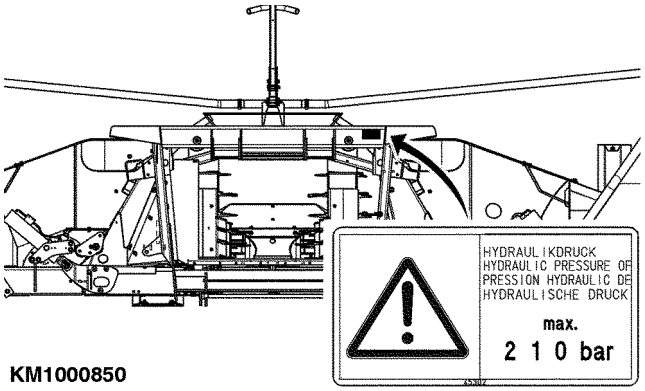
KM232871

KM232871 —UN—19FEB15

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## Hydraulic System

The hydraulic pressure must not exceed 21000 kPa (210 bar; 3046 psi).




KM1000850

KM1000850 —UN—03APR09

KM00321,0000156 -19-03APR09-1/1

## Troubleshooting

**CAUTION: Before making any adjustments or performing any service operations, ALWAYS:**

**- Shut off the engine**
**- Take out the ignition key**
**- Wait until all moving parts have stopped.**

| Symptom | Problem | Solution |
|---|---|---|
| **High power requirement despite poor cut** | Rotating blades are dull | Replace the rotating blades. |
| | Defective cleaners | Install new cleaners. |
| **Grinding noise at the blades** | Rotor is dirty. | Clean the rotor. If possible, the cutting area should be cleaned out before the unit is used. |
| | Defective cleaners | Install new cleaners. |
| **Rotary harvesting unit is vibrating** | Dirty rotating blades cause imbalance | Clean the rotating blades. |
| | Asymmetrically rotating blades cause imbalance | **Always** replace the rotating blades two at a time. |
| | One of the cleaners has broken | Replace **both** of the cleaners. |
| | Imbalance at rotating blade caused by excessive vertical play. | Straighten the blade or install new blades. |
| **Stalks are pushed to the front before they are cut (long, uneven stubble)** | Leaves accumulated at the dividers | Clean the dividers. |
| | One of the cleaners has broken | Replace **both** of the cleaners. |
| **Gathering drums stop rotating** | Blockage in the feeding area | Reverse the gathering drums briefly. Reverse them repeatedly if necessary. |
| | Worn skid shoes | Replace. |
| | Defective gear box | Contact your KEMPER dealer. |
| **Gear box overheating** | Too much oil or too little oil in the gear box | Check oil level in gear box, and add or drain oil as necessary. |
| **Gathering drums and rotating blades do not start.** | Claw clutch defective | Contact your KEMPER dealer. |
| **The entire left or right side of the unit stops rotating.** | Left or right friction clutch defective | Contact your KEMPER dealer. |

**Continued on next page**

| Symptom | Problem | Solution |
|---|---|---|
| **The unit cannot be unfolded or folded.** | A foreign body (for example, grain of sand) is obstructing the restrictor | Contact your KEMPER dealer. |
| **Poor cut when the rows are far apart** | The unit is tackling seven rows of plants. The middle row is hindering the cut. | Tackle only six rows of plants. Contact your KEMPER dealer if necessary. |

jzsgtac,1679472208010 -19-03MAY23-2/2

## Service Intervals

**CAUTION: Before making any adjustments or doing any service work, always:**
**- Switch the machine off**
**- Remove the key from the ignition**
**- Wait until all the moving parts have come to a standstill.**

**IMPORTANT: The intervals quoted here are for average conditions. Adverse operating conditions may make it necessary to apply lubrication or carry out an oil change more often.**

**IMPORTANT: Replace any damaged parts. Any screws that have worked loose must be retightened to the proper torque.**

Clean grease fittings before lubrication. Replace lost or damaged grease fittings immediately. If a new fitting fails to take grease, remove it and check whether the grease passage is blocked.

Perform lubrication and maintenance work mentioned in this section before and after every harvesting season as well.

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## Grease

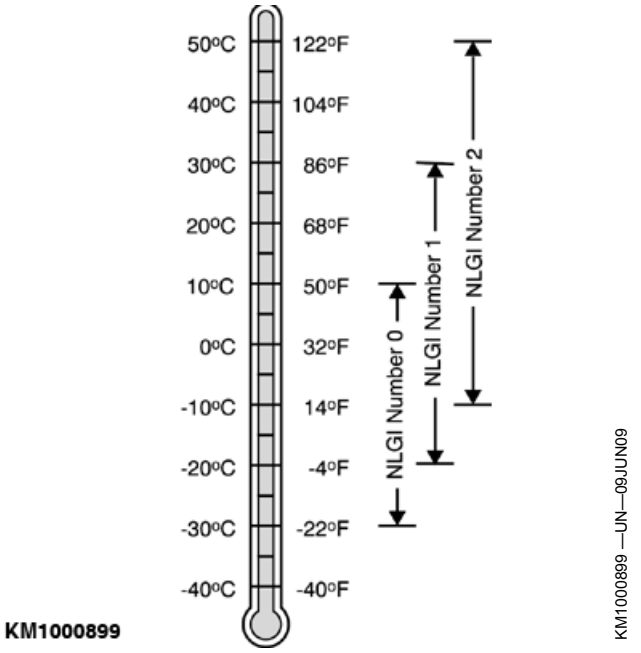
Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

AVIA AVIALITH 2 EP grease is recommended.

Other greases may be used if they meet the following specification:

NLGI Service Classification GC-LB

**IMPORTANT: Some types of grease thickeners are not compatible with others. Contact your lubricant supplier before mixing various types of lubricants.**




km00321,1682344334642 -19-24APR23-1/1

## Low-Viscosity Grease for Gears

The feed drum spur gear angle drives are filled with low-viscosity grease for gears.

The following low-viscosity greases are recommended:

| Manufacturer | Name |
|---|---|
| ARAL | ARALUB FDP 00 |
| BP | ENERGREASE HT 00 EP |
| TEXACO | STARFAK E 900 |
| WESTFALEN | GRESANAT X 00 |

Other low-viscosity greases may be used if they meet the following:

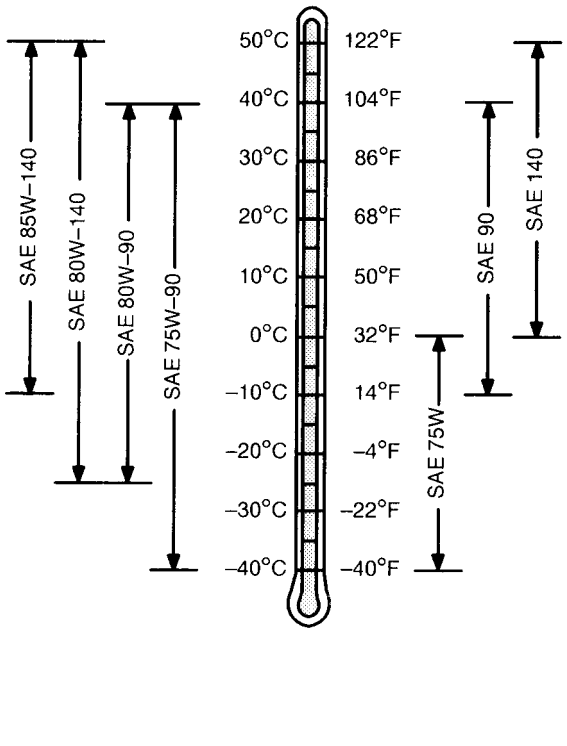
NLGI Performance Classification NLGI 00

KM00321,0000351 -19-14JUL10-1/1

## Gear Oil

Use oil with a viscosity based on the expected air temperature range during the period between oil changes.

Transmission oils must meet API Service Classification GL-5.




km00321,1682344640035 -19-24APR23-1/1

## Coolant for Main Drive Friction Clutch

The cooling system of the main drive friction clutch is filled to provide protection against corrosion and freeze protection to -37 °C (-34 °F).

Use a low silicate ethylene glycol base coolant concentrate. The mixing ratio is 50% concentrate and 50% water.

The coolant concentrate must be of a quality that protects the cast iron in the cooling system from cavitation corrosion.

A 50% mixture of ethylene coolant in water provides freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your KEMPER dealer for recommendations.

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol based coolant concentrate.

**Coolant Change Intervals**

Drain coolant from the main drive friction clutch, flush the cooling system and refill with new coolant after the first 3 years or 3000 hours of operation. At each interval, drain the coolant, flush the cooling system, and refill with new coolant.

km00321,1682344701976 -19-24APR23-1/1

## Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some lubricants may not be available in your location.

Consult your KEMPER dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

km00321,1682344805892 -19-24APR23-1/1

## Mixing Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your Kemper dealer to obtain information and recommendations.

km00321,1682344926139 -19-24APR23-1/1

## Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

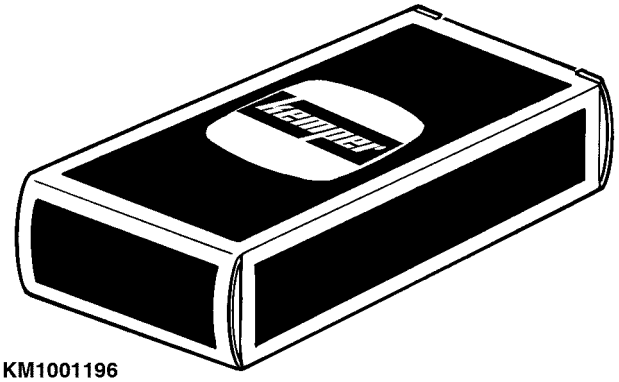
km00321,1682344969170 -19-24APR23-1/1

## Use Genuine Kemper Parts

Genuine Kemper parts have been specifically designed for Kemper machines.

Other parts are neither examined nor released by Kemper. Installation and use of such products could have negative effects upon the design characteristics of Kemper machines and thereby affect their safety.

Avoid this risk by using only genuine Kemper parts.




KM1001196

KM1001196 —UN—03MAY10

km00321,1682345027370 -19-24APR23-1/1

## Oil Change

**IMPORTANT: The oil in the drives must be changed after the first 100 hours and then every 500 hours in service.**

Drain the oil while it is still hot (after operation). Pull out filler plug and drain plug, then drain oil into a suitable receptacle. Clean drain plug before inserting. Add the correct quantity of oil.

**IMPORTANT: Do not fill with too much oil as this will result in overheating and oil loss.**

km00321,1682345207075 -19-24APR23-1/1

## At the Start of Every Harvesting Season

Before putting the harvester into operation, carry out a general check of the friction clutches in the main drive, and do a check on the gatherer drums. In the "Service" section, see "Relieving Pressure at the Slip Clutches on the Main Drive".

Run the rotary harvesting unit for a few minutes. Then check all the bearings. If overheating or excessive play is found, replace the relevant bearings before operating the rotary harvesting unit.

jzsgtac,1679473844145 -19-22MAR23-1/1

## At the Start of Every Harvesting Season—Spherical Collar Bolts

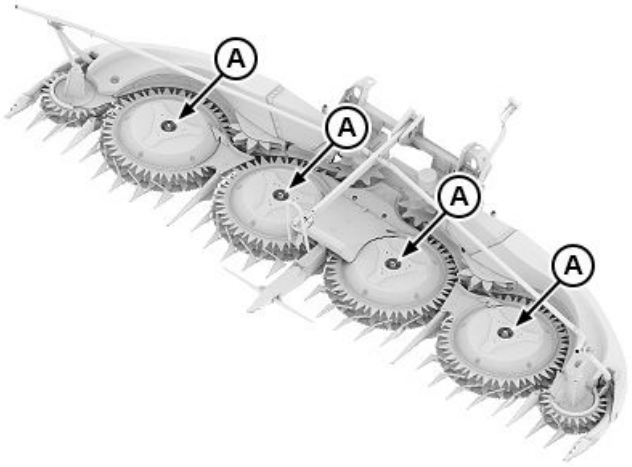
The torques of the spherical collar bolts (A) at the large gathering drums must be checked prior to each harvesting season and adjusted where necessary.

The torque setting is:

| Specification | |
|---|---|
| Spherical Collar Bolts—Torque | 200 N·m (148 lb.-ft.) |

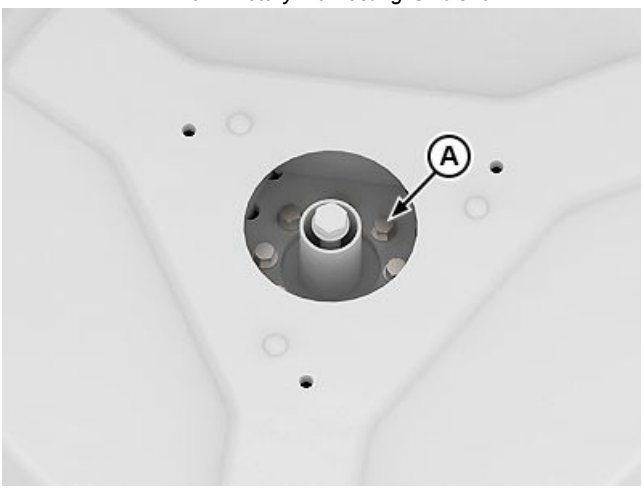
*NOTE: Four large gathering drums are used on 460$^{pro}$ and 475$^{pro}$, and six on 490$^{pro}$ rotary harvesting units.*

**A—Spherical Collar Bolts**




KM574665 —UN—28APR23

*475$^{pro}$ Rotary Harvesting Unit shown*




KM574666 —UN—28APR23

km00321,1681734284490 -19-28APR23-1/1

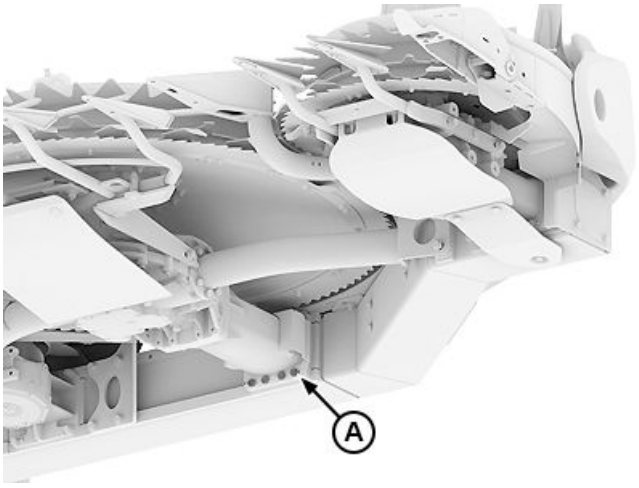
## At the Start of Every Harvesting Season—Gearbox Mounting Flange Attaching Screws

Flange screws (A) at gearbox mounting flanges of gathering drums must be retightened to the specified torque prior to each harvesting season and then retightened after 50 hours in service.

The torque setting is:

| Specification | |
|---|---|
| Gearbox Mounting Flange Attaching Screws—Torque | 87 N·m (64.2 lb.-ft.) |

**A—Screw**

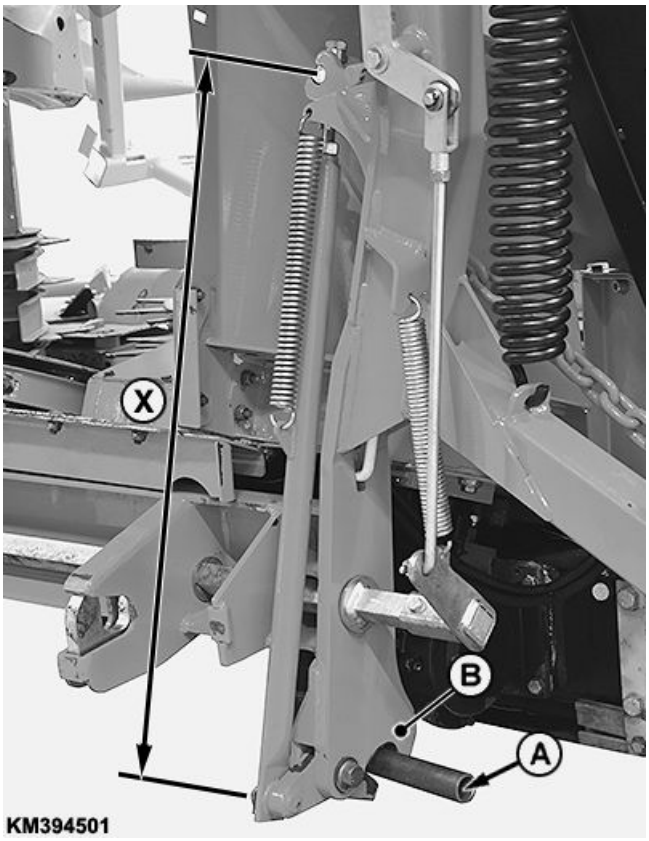



KM574667 —UN—28APR23

*475$^{pro}$ Rotary Harvesting Unit shown*

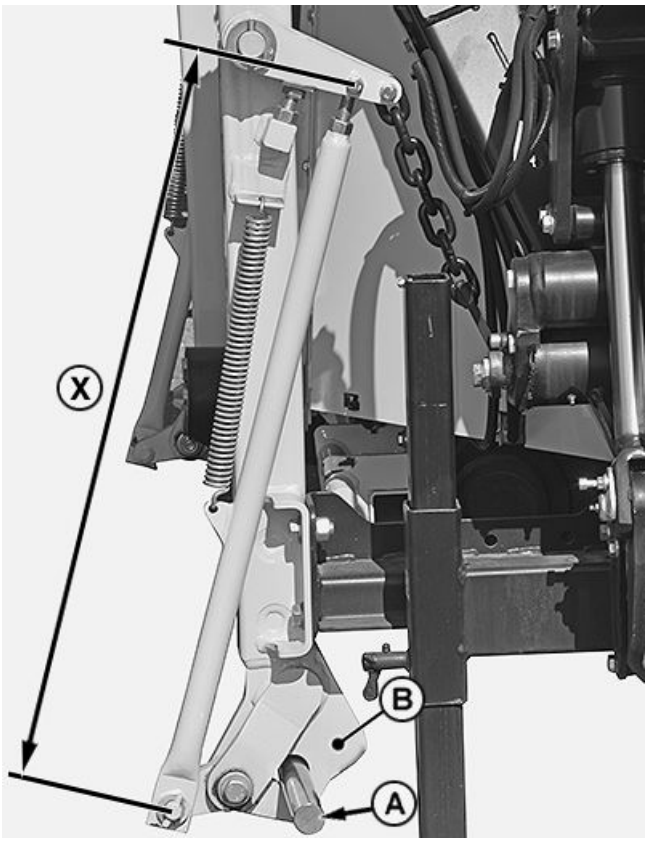
km00321,1681734910468 -19-28APR23-1/1

## At the Start of Every Harvesting season — Adjust Latch of the Support Wheel (Optional)




KM394501 —UN—14NOV19

*Rotary harvesting units for Claas forage harvesters*




KM409037 —UN—17APR20

*Rotary harvesting units for Fendt forage harvesters*

**A—Shaft**
**B—Claw**
**X—Setting Dimension**

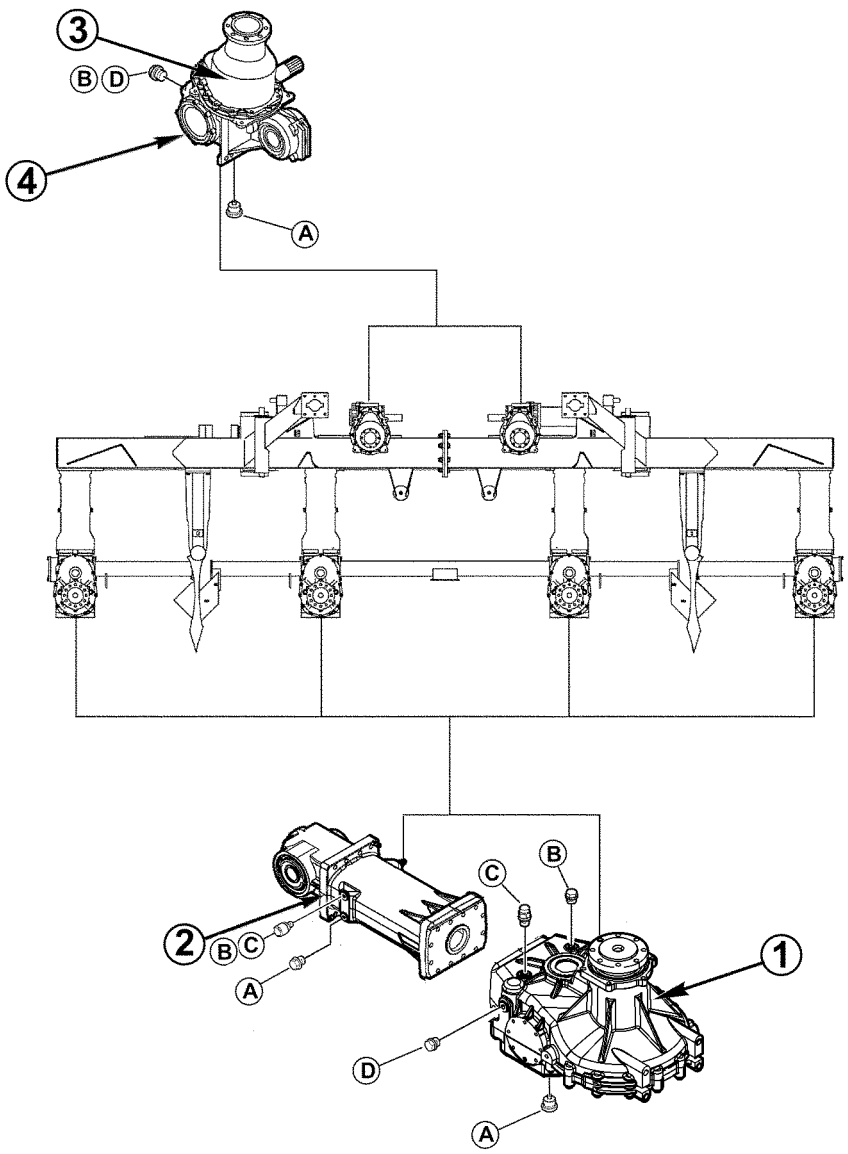
Insert a 35 mm (1.38 in.) diameter shaft (A) into jaw (B). Close Jaw (B) by folding the rotary harvesting unit up.

**IMPORTANT: To avoid damaging jaws and braces, slowly raise the rotary harvesting unit.**

Adjust dimension (X) of brace so that shaft (A) fits in jaw (B) without play.

jzsgtac,1679473843343 -19-03MAY23-1/1

## Overview of Transmission and Oil Levels (460pro)




KM417111

KM417111 —UN—29OCT20

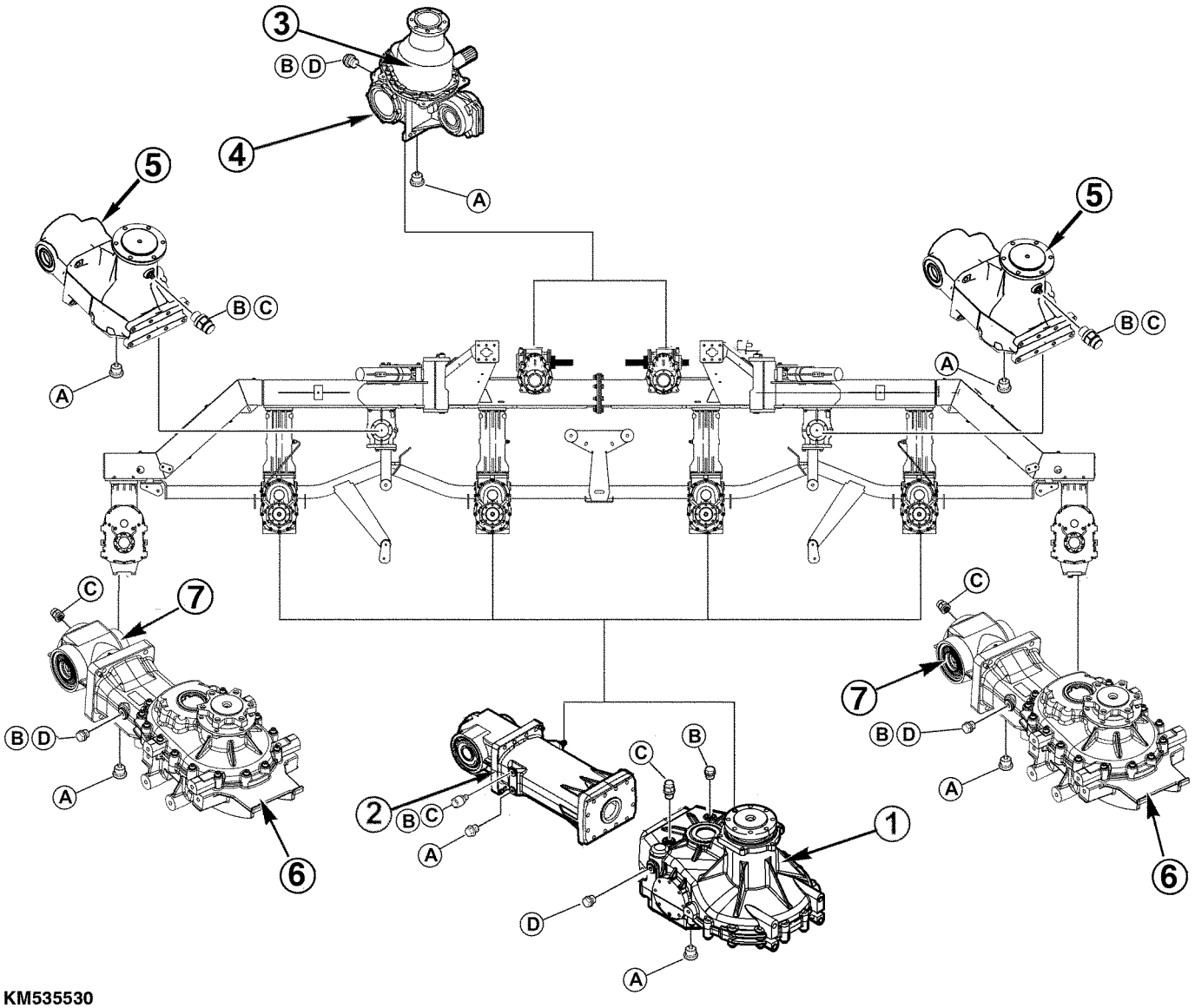
**A—Oil drain screw**
**B—Oil filler plug**
**C—Vent**
**D—Oil level plug**
**1— Spur-gear angle drives of the gathering drums - 8,5 L (2.25 US. gal.)**
**2— Bevel gear drive - 1.5 L (0.4 US. gal.)**
**3— Feed drum spur-gear angle drive (with a lifetime filling of 1.1 kg (2.42 lb.) low viscosity grease for gears)**
**4— Spur-gear angle drive - 1.1 L (0.29 US. gal.)**

**IMPORTANT: Oil in the gearboxes must be changed after the first 100 operating hours and then every 500 operating hours.**

1. Raise the rotary harvesting unit until it is in horizontal position.
2. Unfold the rotary harvesting unit.

km00321,1683101741660 -19-03MAY23-1/1

## Overview of Transmission and Oil Levels (475pro)




KM535530

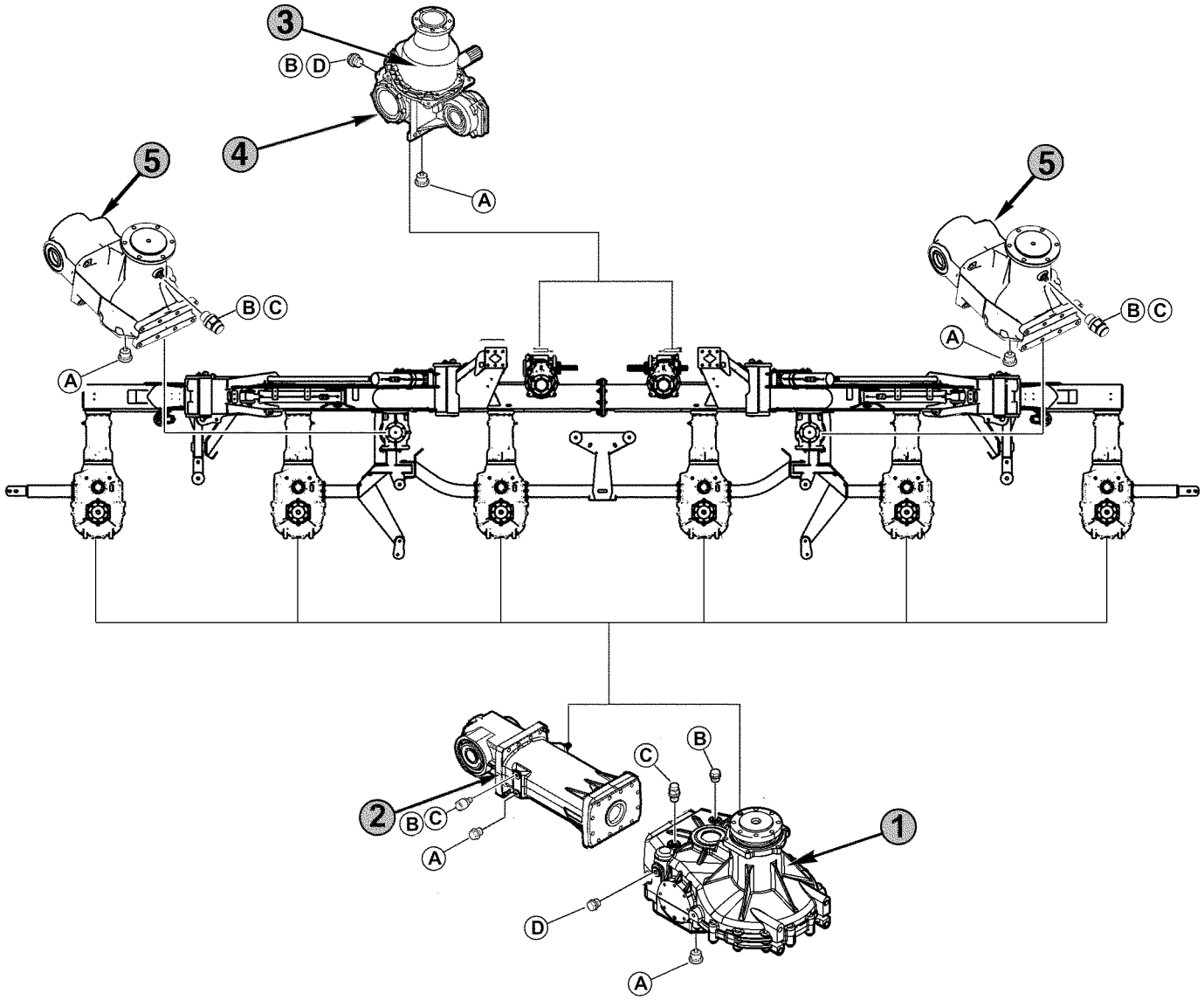
A—Oil drain screw
B—Oil Filler Plug
C—Vent
D—Oil level plug
1—Gathering Drums, Spur Gear Angle Drive - 8.5 L (2.25 US. gal.)
2—Angle Drive - 1.5 L (0.4 US. gal.)
3—Feed Drum Spur Gear Angle Drive (with a Lifetime Filling of 1.1 kg (2.42 lb.) Low-Viscosity Grease for Gears)
4—Spur Gear Angle Drive - 1.1 L (0.29 US. gal.)
5—Cross Feed Drums, Spur Gear Angle Drive - 2.5 L (0.66 US. gal.)
6—Gathering Drums, Spur Gear Angle Drive - 2 L (0.53 US. gal.)
7—Bevel gear drive - filled with oil for lifetime

**IMPORTANT: Oil in the gearboxes must be changed after the first 100 operating hours and then every 500 operating hours.**

1. Raise the rotary harvesting unit until it is horizontal.
2. Unfold the rotary harvesting unit.

jzsgtac,1679473843822 -19-03MAY23-1/1

## Overview of Transmission and Oil Levels (490pro)




KM342342 —UN—19JAN18

KM342342

A—Oil drain screw
B—Oil filler plug
C—Vent
D—Oil level plug
1—Feeder house drums, spur-gear angle drive - 9 L (2.38 US. gal.)
2—Bevel gear drive - 1.5 L (0.4 US. gal.)
3—Spur-gear angle drive of the feed drum (with a lifetime filling of 1.1 kg (2.42 lb.) low-viscosity grease for gears)
4—Spur-gear angle drive - 1.1 L (0.29 US. gal.)
5—Cross feed drums, spur-gear angle drive - 2.5 L (0.66 US. gal.)

**IMPORTANT: Oil in the gearboxes must be changed after the first 100 operating hours of operation and then every 500 operating hours.**

1. Raise the rotary harvesting unit until it is horizontal.
2. Unfold the rotary harvesting unit.

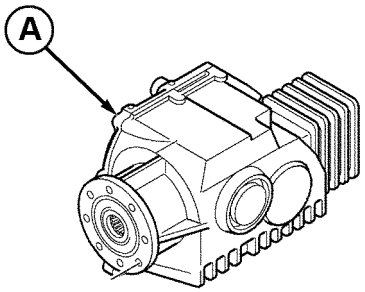
km00321,1683102344147 -19-03MAY23-1/1

## Overview of Oil Levels in Input Transmission

### Rotary harvesting units for Claas forage harvesters

**A—Gear Box - 4.3 L (1.14 U.S. gal.)**

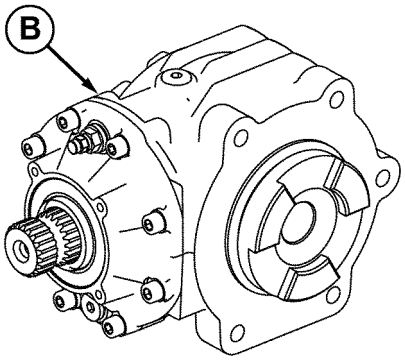
**B—Bevel gear drive for quick-coupler (option) - 1.2 L (0.32 U.S. gal.)**




KM1002338 —UN—05JUL12

**KM1002338**

*Manual Shift Transmission*




KM219184 —UN—15SEP14

**KM219184**

*Bevel Gear Drive for Quick Coupler (Option)*

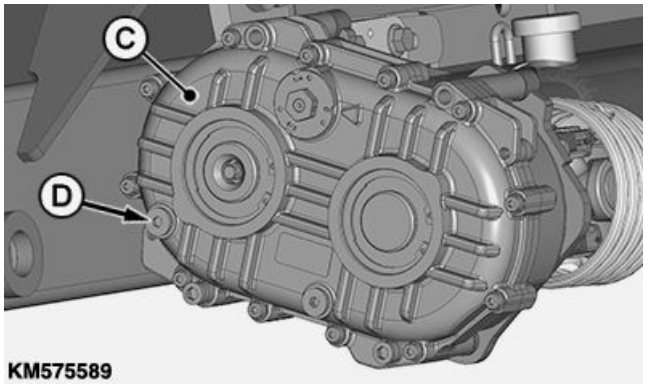
jzsgtac,1679473843704 -19-11OCT23-1/4

### Oil Level in 4-Speed Multi-Speed Gearbox (Option):

Raise rotary harvesting unit slightly so that it is horizontal. The oil level should now reach the bottom edge of the oil level plug (D).

**C—4-Speed Multi-Speed Drive (Option) - 1.25 L (0.33 U.S. gal.)**

**D—Level plug**




KM575589 —UN—03MAY23

**KM575589**

*4-Speed Multi-Speed Gearbox (Option)*

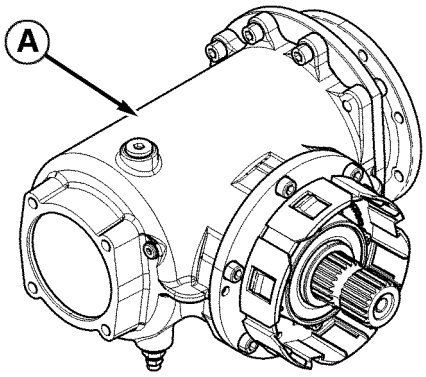
**Continued on next page**

jzsgtac,1679473843704 -19-11OCT23-2/4

**Rotary harvesting units for Fendt forage harvesters (types T650, T652 and T653)**

*NOTE: See the forage harvester type plate for the exact type designation.*

**A—Bevel gear drive - 0.8 L (0.21 U.S. gal.)**




**KM329473**

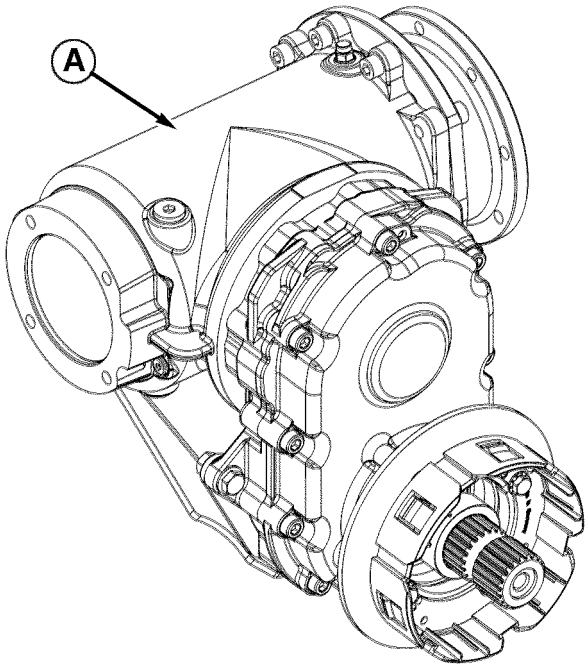
KM329473 —UN—06OCT17

jzsgtac,1679473843704 -19-11OCT23-3/4

**Rotary harvesting units for Fendt forage harvesters (types T658 and T659)**

*NOTE: See the forage harvester type plate for the exact type designation.*

**A—Bevel gear drive - 2.0 L (0.53 U.S. gal.)**




**KM417112**

KM417112 —UN—29OCT20

jzsgtac,1679473843704 -19-11OCT23-4/4

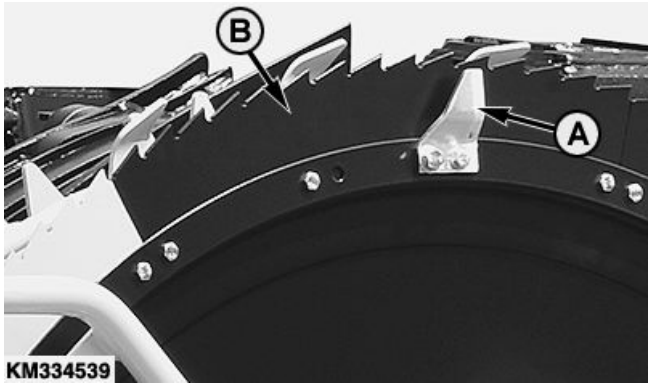
## Every 10 Hours—Cleaners and Blade Rotor Segments

Check all cleaners (A) and blade rotor segments (B) for signs of wear.

Replace worn parts (see "Service" section).

**A—Cleaner**

**B—Blade Rotor Segment**




KM334539 —UN—02NOV17

KM00321,00006F3 -19-03NOV17-1/1

## Every 10 Hours—Balancing Weights

Check balancing weights (A) under the rotating blades for signs of wear.

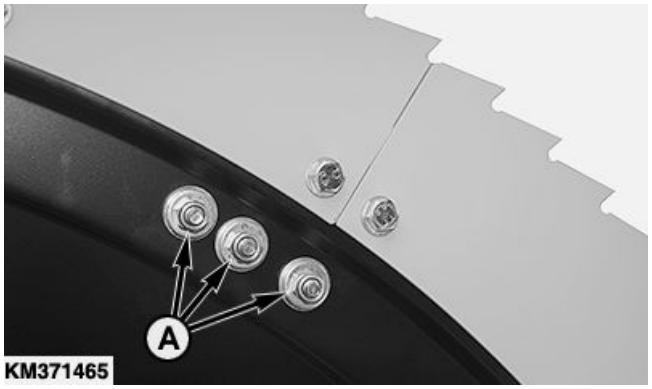
Replace damaged or worn balancing weights (A).

*NOTE: One balancing weight consists of a screw, a washer, and a nut.*

Insert screws with Loctite® 270 and tighten to the specified torque.

| Specification | |
|---|---|
| Attaching Screws of Balancing Weights—Torque | 25 N·m (18.5 lb·ft) |

*Loctite is a trademark of Henkel Corporation*




KM371465 —UN—05MAR19

**A—Balancing Weights**

KM00321,0000B5E -19-11MAR21-1/1

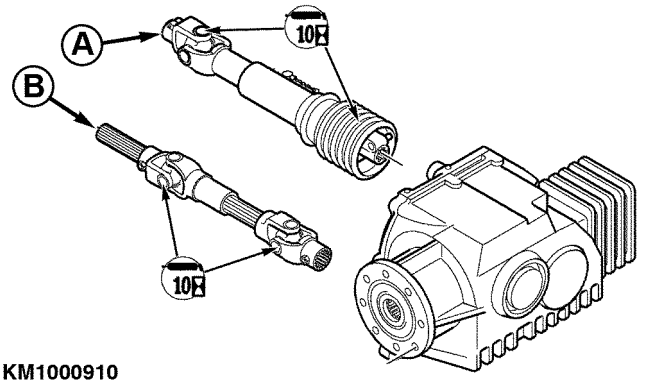
## Every 10 Hours—Universal-Jointed Shaft

Lubricate with grease.

**A—Universal-Jointed Shaft, CLAAS Type 492**

**A—Universal-Jointed Shaft, FENDT**

**B—Universal-Jointed Shaft, CLAAS Types 493, 494, 497, and 498**

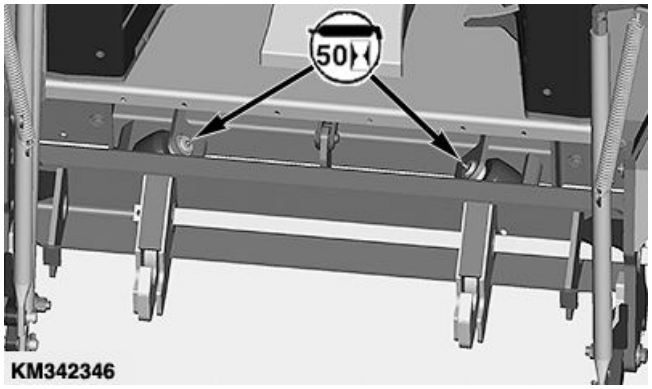



KM1000910 —UN—17JUN09

jzsgtac,1679473843258 -19-03MAY23-1/1

## Every 50 Hours—Lower Rollers of Tilt Frame (Headers for Claas Forage Harvesters)

Lubricate with grease.

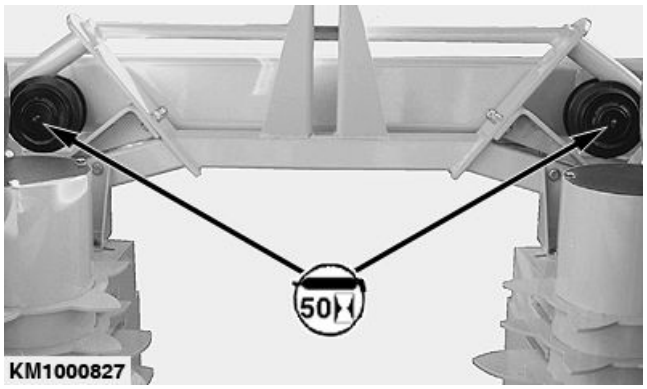



KM342346 —UN—24JAN18

jzsgtac,1679473842231 -19-05MAY23-1/1

## Every 50 Hours—Upper Rolls of Tilt Frame (Headers for Claas Forage Harvesters)

Lubricate with grease.




KM1000827 —UN—25MAR09

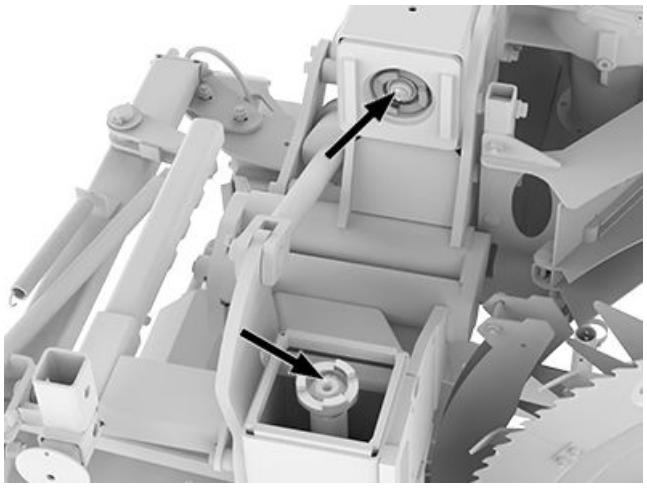
jzsgtac,1679473842511 -19-05MAY23-1/1

## Every 50 Hours—Claw Couplings

Clean all claw couplings (see arrows).

Lubricate with grease.

Lay also a film grease on the grooved surface of the clutch claws, using a brush.

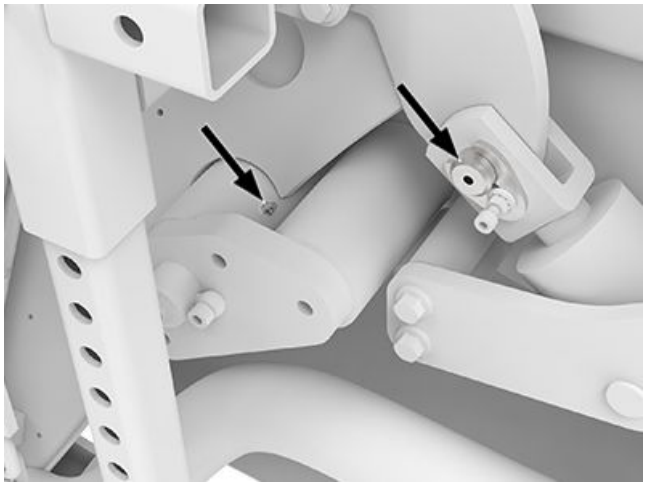


KM574671 —UN—28APR23

km00321,1683106999316 -19-03MAY23-1/1

## Every 50 Hours—Hydraulic Cylinder Lower Pin and Outer Unit Hinges

Lubricate with grease.

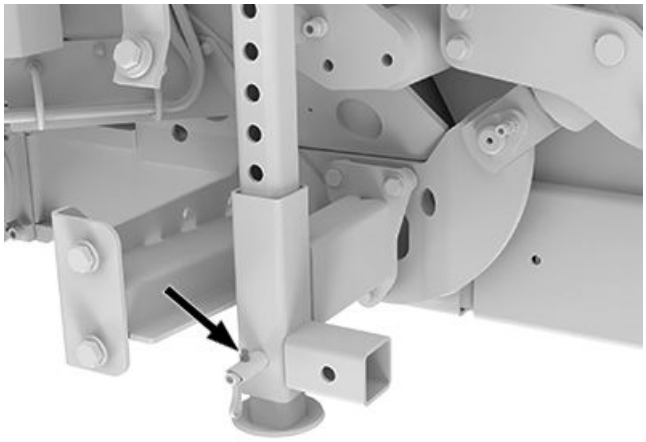


KM574673 —UN—28APR23

km00321,1683107106137 -19-03MAY23-1/1

## Every 50 Hours—Spring-Loaded Pins

Lubricate with grease.



KM574677 —UN—28APR23

km00321,1683107175961 -19-03MAY23-1/1

## Every 50 Hours—Outer Drives (475pro Only)

Remove covers (A) and lubricate bearings and drive shafts with grease.

Reinstall covers (A).

**A—Covers**



KM574674 —UN—28APR23



KM574675 —UN—28APR23

km00321,1683107261292 -19-03MAY23-1/1

## Every 50 Hours—Outer Unit Hinges (490pro Only)

Lubricate with grease.



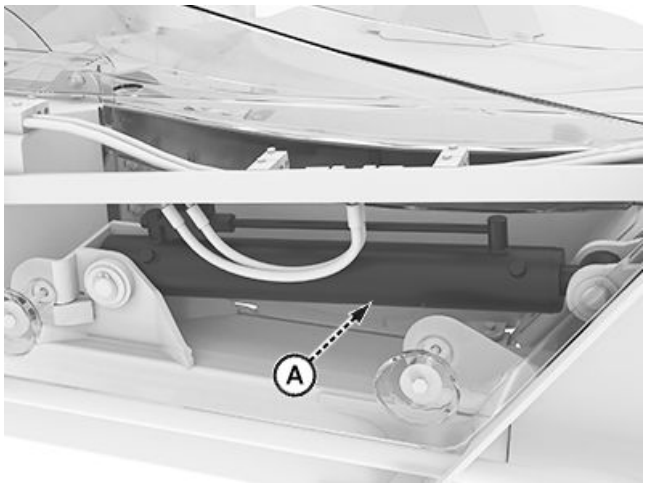

KM336524 —UN—03NOV17

km00321,1683107322898 -19-03MAY23-1/1

## Every 50 Hours—Folding Cylinder (490pro Only)

Clean the area under the folding cylinders (A) on both sides and remove crop residues.

**A—Folding Cylinder**




KM574676 —UN—28APR23

km00321,1681913328763 -19-28APR23-1/1

## Every 50 Hours—Locking Pawls (490pro Only)

Clean locking pawls (A).

**A—Locking Pawls**




KM371469 —UN—05MAR19

km00321,1681913372620 -19-19APR23-1/1

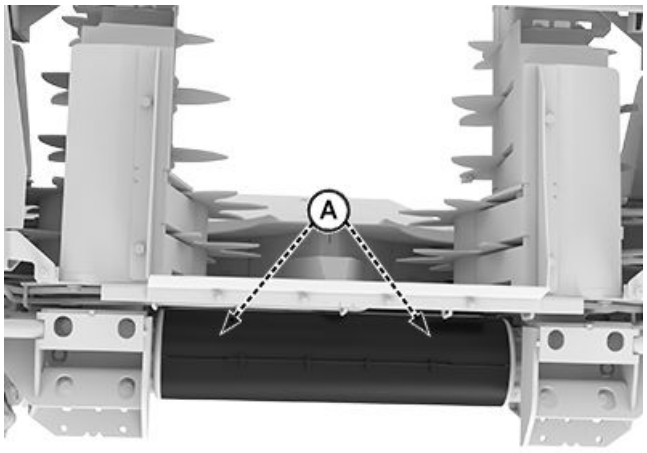
## Every 3 Years—Change Coolant of Main Drive Friction Clutch

**CAUTION: Never attempt to open drain or filler plug (B) when the friction clutch is hot! Wait until friction clutch has cooled down. First loosen plug (B) by one turn to relieve pressure.**

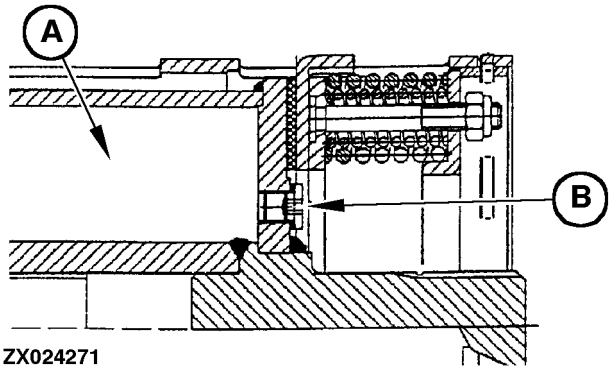
The cavity of the friction clutch (A) can be drained and refilled. This service work requires the friction clutch to be removed from the machine. Therefore it is advised to contact your KEMPER dealer to drain/refill the friction clutch.

**Specification**

Main drive friction clutch cavity—Capacity..... 1.3 L (0.26 US gal.)




KM574679 —UN—28APR23

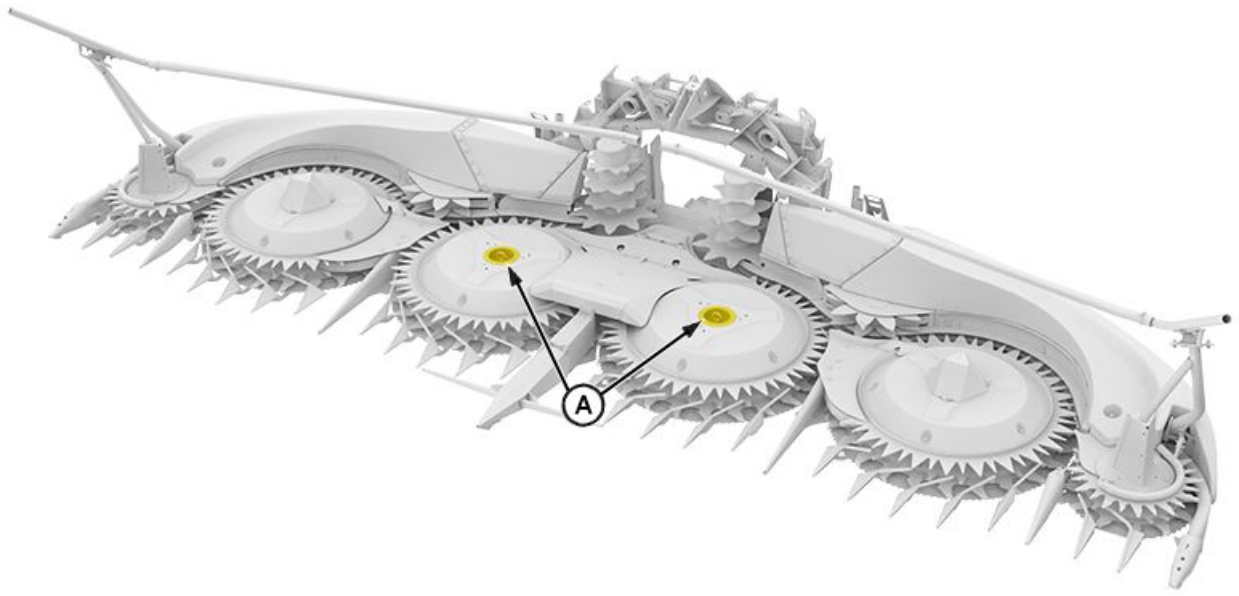



ZX024271

ZX024271 —UN—07MAR01

jzsgtac,1679473842160 -19-03MAY23-1/1

## After Each Harvesting Season




KM574678 —UN—28APR23

*475$^{pro}$ Rotary Harvesting Unit shown*

**A—Depressions**

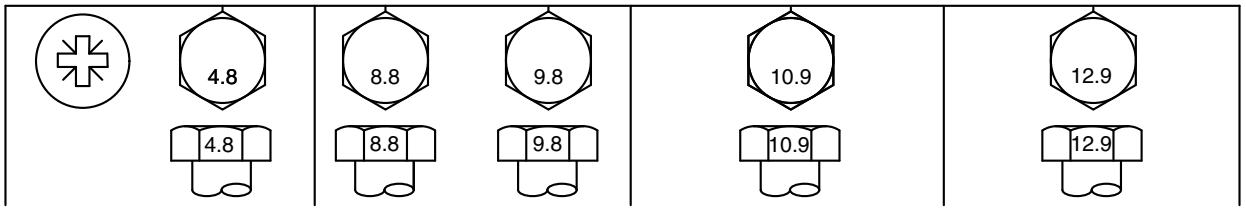
- Clean the entire rotary harvesting unit - pay particular attention to the depressions (A) in the gathering drums.
- Change the gear oil in all drives. See General View of Drives and Oil Levels on the Rotary Harvesting Unit.
- Lubricate all grease fittings.
- Check the entire rotary harvesting unit for defective or worn components. Order the relevant parts immediately from your KEMPER dealer, so that they can be installed in time for the next harvesting season.

**IMPORTANT: Only properly serviced units give the best results.**

jzsgtac,1679473843075 -19-03MAY23-1/1

## Metric Bolt and Screw Torque Values

TS1742 —UN—31MAY18



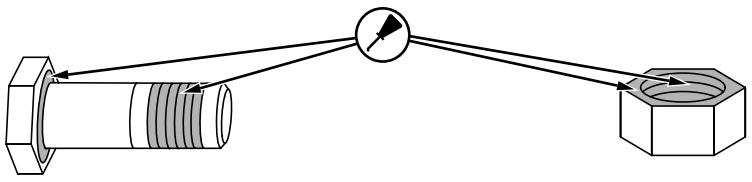

| Bolt or Screw Size | Class 4.8 | | | | Class 8.8 or 9.8 | | | | Class 10.9 | | | | Class 12.9 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hex Head[a] | | Flange Head[b] | | Hex Head[a] | | Flange Head[b] | | Hex Head[a] | | Flange Head[b] | | Hex Head[a] | | Flange Head[b] | |
| | N·m | lb·in | N·m | lb·in | N·m | lb·in | N·m | lb·in | N·m | lb·in | N·m | lb·in | N·m | lb·in | N·m | lb·in |
| M6 | 3.6 | 31.9 | 3.9 | 34.5 | 6.7 | 59.3 | 7.3 | 64.6 | 9.8 | 86.7 | 10.8 | 95.6 | 11.5 | 102 | 12.6 | 112 |
| | | | | | | | | | N·m | lb·ft | N·m | lb·ft | N·m | lb·ft | N·m | lb·ft |
| M8 | 8.6 | 76.1 | 9.4 | 83.2 | 16.2 | 143 | 17.6 | 156 | 23.8 | 17.6 | 25.9 | 19.1 | 27.8 | 20.5 | 30.3 | 22.3 |
| | | | N·m | lb·ft | N·m | lb·ft | N·m | lb·ft | | | | | | | | |
| M10 | 16.9 | 150 | 18.4 | 13.6 | 31.9 | 23.5 | 34.7 | 25.6 | 46.8 | 34.5 | 51 | 37.6 | 55 | 40.6 | 60 | 44.3 |
| | N·m | lb·ft | | | | | | | | | | | | | | |
| M12 | — | — | — | — | 55 | 40.6 | 61 | 45 | 81 | 59.7 | 89 | 65.6 | 95 | 70.1 | 105 | 77.4 |
| M14 | — | — | — | — | 87 | 64.2 | 96 | 70.8 | 128 | 94.4 | 141 | 104 | 150 | 111 | 165 | 122 |
| M16 | — | — | — | — | 135 | 99.6 | 149 | 110 | 198 | 146 | 219 | 162 | 232 | 171 | 257 | 190 |
| M18 | — | — | — | — | 193 | 142 | 214 | 158 | 275 | 203 | 304 | 224 | 322 | 245 | 356 | 263 |
| M20 | — | — | — | — | 272 | 201 | 301 | 222 | 387 | 285 | 428 | 316 | 453 | 334 | 501 | 370 |
| M22 | — | — | — | — | 365 | 263 | 405 | 299 | 520 | 384 | 576 | 425 | 608 | 448 | 674 | 497 |
| M24 | — | — | — | — | 468 | 345 | 518 | 382 | 666 | 491 | 738 | 544 | 780 | 575 | 864 | 637 |
| M27 | — | — | — | — | 683 | 504 | 758 | 559 | 973 | 718 | 1080 | 797 | 1139 | 840 | 1263 | 932 |
| M30 | — | — | — | — | 932 | 687 | 1029 | 759 | 1327 | 979 | 1466 | 1081 | 1553 | 1145 | 1715 | 1265 |
| M33 | — | — | — | — | 1258 | 928 | 1398 | 1031 | 1788 | 1319 | 1986 | 1465 | 2092 | 1543 | 2324 | 1714 |
| M36 | — | — | — | — | 1617 | 1193 | 1789 | 1319 | 2303 | 1699 | 2548 | 1879 | 2695 | 1988 | 2982 | 2199 |

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741 —UN—22MAY18



*[a]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.*
*[b]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.*

DX,TORQ2 -19-09MAY22-1/1

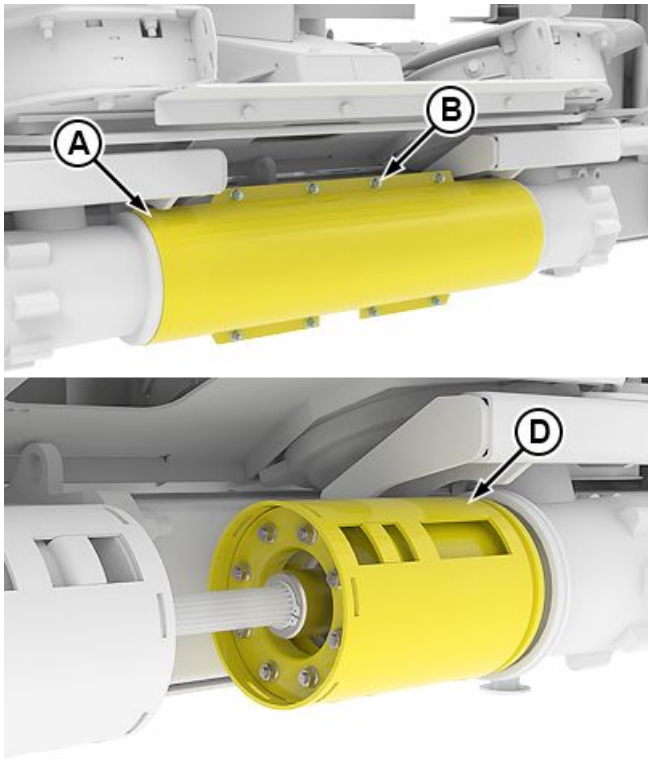
## Relieving Pressure at the Slip Clutches on the Main Drive

**CAUTION: Before making any adjustments or doing any service work, always:**
- **Switch the machine off**
- **Remove the key from the ignition**
- **Wait until all the moving parts have come to a standstill.**

The two slip clutches (D) on the main drive protect the rotary harvesting unit from unnecessary loads. It is therefore important to keep these clutches properly serviced. The torque setting is 1180 N·m (870.3 lb.-ft.) for models 490$^{pro}$ and 475$^{pro}$, and 900 N·m (657 lb.-ft.) for model 460$^{pro}$.

**IMPORTANT: The following steps must be taken before the rotary harvesting unit is put into service for the first time, and between harvesting seasons as well.**

1. Remove screws (B) and cover (A).




KM569717 —UN—05APR23

km00321,1683525856528 -19-08MAY23-1/2

2. Tighten screws (C). This reduces pressure on the clutch disks.
3. Rotate the slip clutch by hand.

**IMPORTANT: If it is not possible to turn slip clutch by hand, it has to be disassembled and cleaned for proper function. See Removal of Slip Clutch and Disassembling Slip Clutch in this Section.**

4. Unscrew screws (C) as far as their threads allow (without removing them completely).
5. Install cover (A), bolting it down with screws (B).

**IMPORTANT: We recommend that you have the slip clutches checked by your Kemper dealer once every year.**




KM569718 —UN—05APR23

km00321,1683525856528 -19-08MAY23-2/2

## Disassemble Slip Clutch

If it is not possible to turn slip clutch by hand as explained under ”Relieving Pressure at the Slip Clutches on the Main Drive”, it has to be disassembled and cleaned for proper function. Proceed as follows:

1. Remove clutches from harvesting unit.
2. Tighten the nuts (A). This relieves pressure on the friction plates.
3. First remove bushing (I) from housing (B).
4. Then remove all parts of friction clutch from housing (B).
5. Clean all parts, especially the friction disks (C, E). Replace worn parts.
6. Reassemble all parts.
7. Install bushing (I) as shown in "Torque Settings" below.
8. Slacken off nuts (A) to the end of their threads.
9. Reinstall clutches to harvesting unit.

**Torque Setting:**

**IMPORTANT: The specified torque of 1180 N·m (870.3 lb-ft) for models 490$^{pro}$ and 475$^{pro}$ must not be exceeded.**

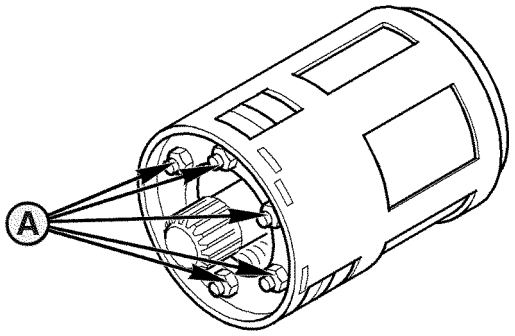
**The specified torque of 900 N·m (657 lb.-ft.) for model 460$^{pro}$ must not be exceeded.**

**490$^{pro}$, 475$^{pro}$:**

The torque of 1180 N·m (870.3 lb-ft) is set by positioning the profile (F) towards the outside and engaged with outer recess (G) of housing (B).

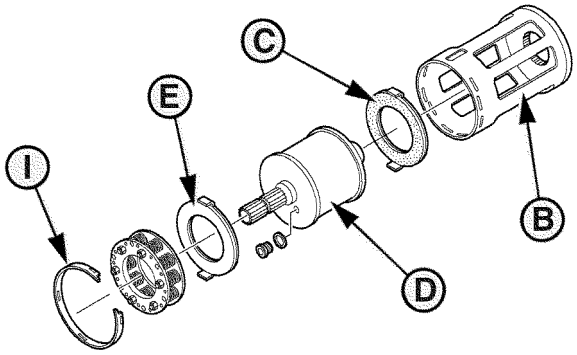
**460$^{pro}$:**

The torque of 900 N·m (657 lb.-ft.) is set by positioning the profile (F) towards the inside and engaged with inner recess (H) of housing (B).



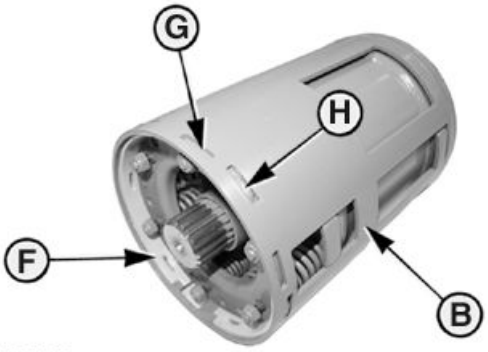

KM1000160

KM1000160 —UN—16OCT07




KM1000161

KM1000161 —UN—16OCT07



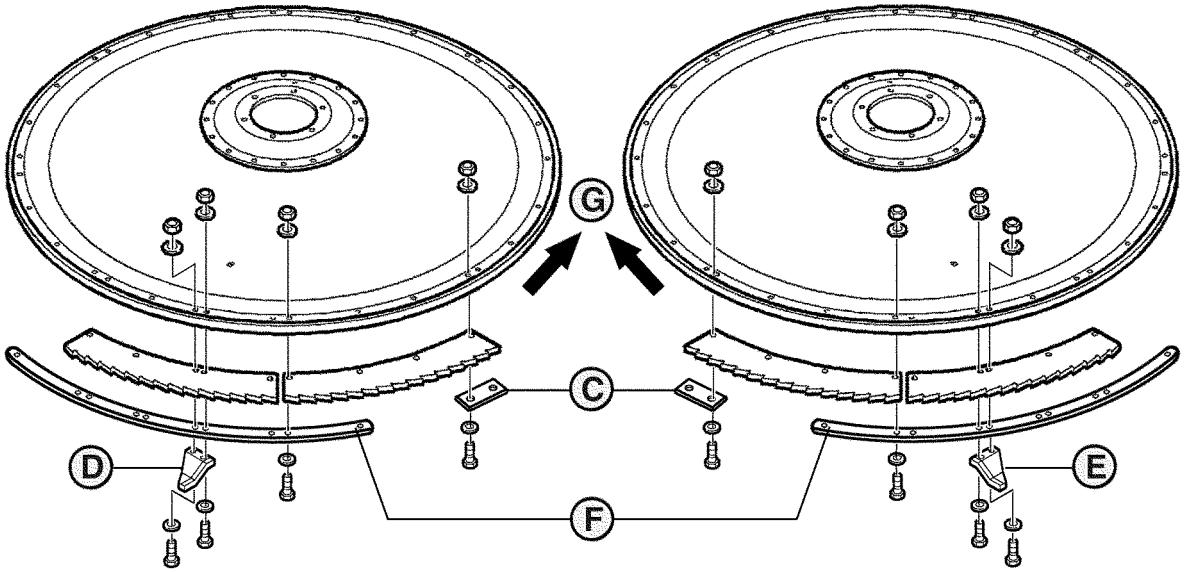

KM1000162

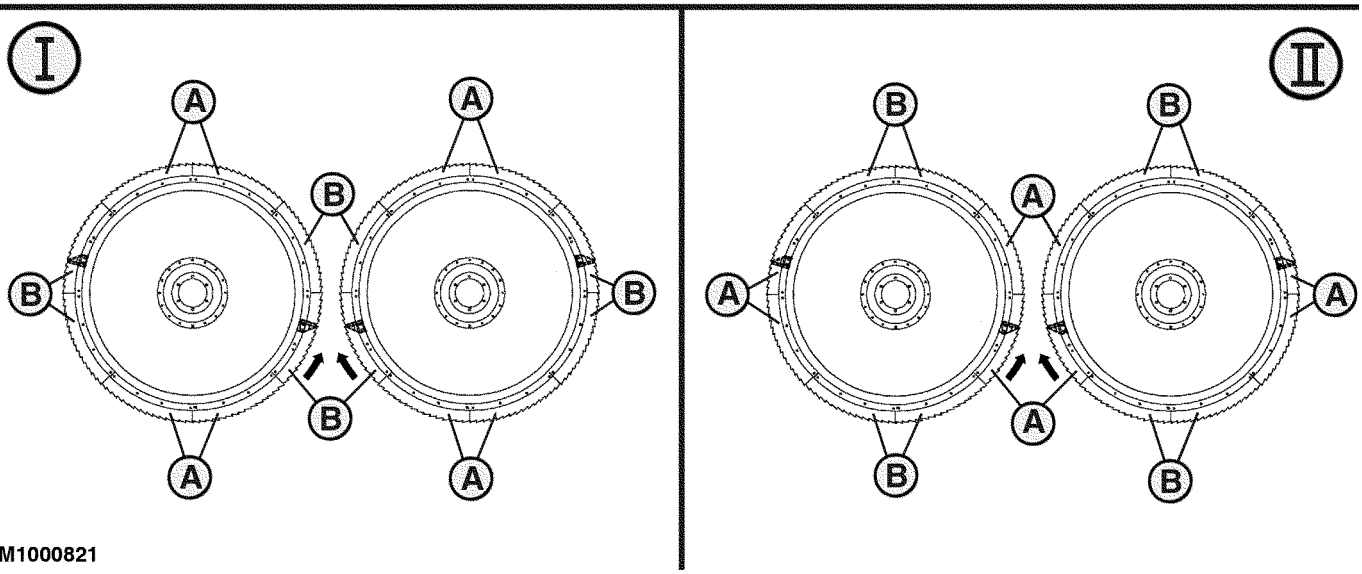
KM1000162 —UN—16OCT07

**A—Nut**
**B—Housing**
**C—Friction disk**
**D—Coolant fluid reservoir - 1.3 L (0.34 US. gal)**
**— 0.65 L (0.17 US gal.) Water**
**— 0.65 L (0.17 US gal.) Anti-freezing compound**
**E—Friction disk**
**F—Profile**
**G—Outer recess**
**H—Inner recess**
**I— Bushing**

km00321,1681822271541 -19-20APR23-1/1

## Installing New Rotating Blades




KM1000821

KM1000821 —UN—24MAR09

**A—Yellow Blade**
**B—Black Blade**
**C—Strap**
**D—Cleaner (Counter-Clockwise)**
**E—Cleaner (Clockwise)**
**F—Reinforcement Strap**
**G—Direction of Cut**

**CAUTION: Before making any adjustments or doing any service work, always:**
**- Switch the machine off**
**- Remove the key from the ignition**
**- Wait until all the moving parts have come to a standstill.**

**IMPORTANT: The rotating blades must be installed with their tips pointing in the direction of cut (G).**

1. There are different blades.
   In all, 8 blades are installed on each rotating cutter.
   - 4 yellow blades (A), and
   - 4 black blades (B)
2. The blades are installed in the order: 2 yellow (A), then 2 black (B). Remember to bolt on straps (C).

   **IMPORTANT: Install blade with coated area up.**

3. Remember to install cleaner (D) or (E) and reinforcing straps (F) as shown in the relevant installation scheme (I) or (II) on black or yellow blades, depending on installing coated (I) or uncoated (II) blades. Cleaner (D) is for counter-clockwise rotation and cleaner (E) is for clockwise rotation.

**Continued on next page**

KM00321,0000532 -19-05DEC11-1/3

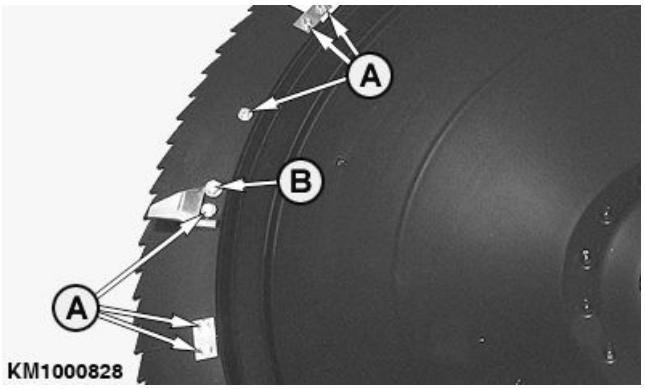
*NOTE: Install cleaners (D) and (E) with their cutting edges facing in the direction of cut.*

KM00321,0000532 -19-05DEC11-2/3

Tighten all attaching screws of blade segments and cleaners with the specified torque.

| Specification | |
|---|---|
| M8 Screws—Torque | 28 N·m<br>20.65 lb.-ft. |
| M10 Screws—Torque | 51 N·m<br>37.62 lb.-ft. |

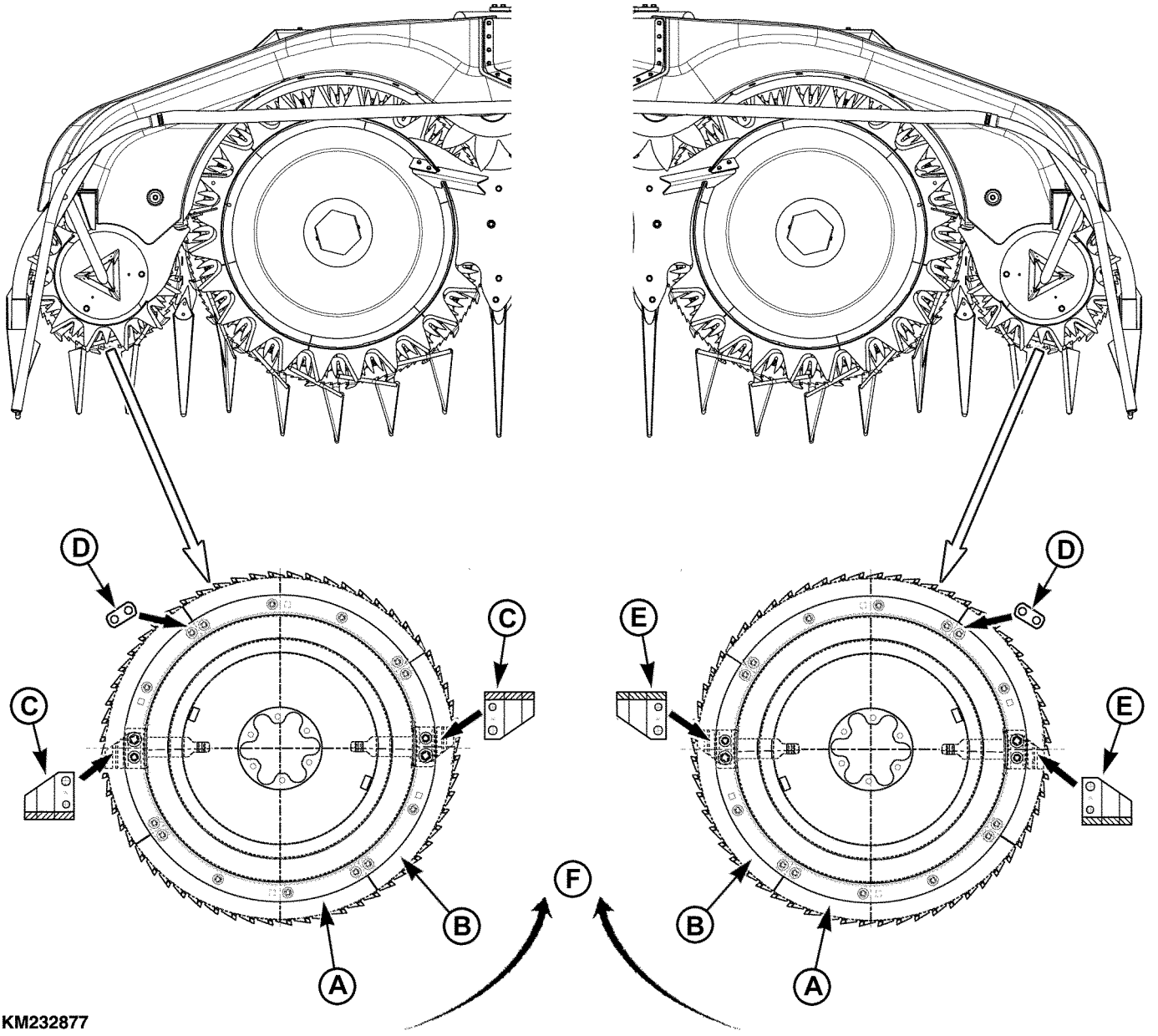
**A—M8 Screws** **B—M10 Screws**




KM1000828 —UN—26MAR09

KM00321,0000532 -19-05DEC11-3/3

## Installing New Rotating Blades (Small Drums, 475pro Only)




A—Yellow Blade
B—Black Blade
C—Cleaner (Counterclockwise)
D—Strap
E—Cleaner (Clockwise)
F—Direction of Cut

**CAUTION: Before making any adjustments or doing any service work, always:**
- **Switch the machine off**
- **Remove the key from the ignition**
- **Wait until all the moving parts have come to a standstill.**

**IMPORTANT: The rotating blades must be installed with their tips pointing in the direction of cut (F).**

1. There are different blades.

   In all, 4 blades are installed on each rotating cutter.
   - 2 yellow blades (A), and
   - 2 black blades (B)
2. The blades are installed in the order: 1 yellow, 1 black, 1 yellow, 1 black.

   **IMPORTANT: Install blades with coated area up.**
3. Remember to install cleaner (C) or (E) as shown in the installation scheme. Cleaner (C) is for counterclockwise rotation and cleaner (E) is for clockwise rotation.

Continued on next page
km00321,1681826846337 -19-18APR23-1/3

*NOTE: Install cleaners (C) and (E) with their cutting edges facing in the direction of cut.*

km00321,1681826846337 -19-18APR23-2/3

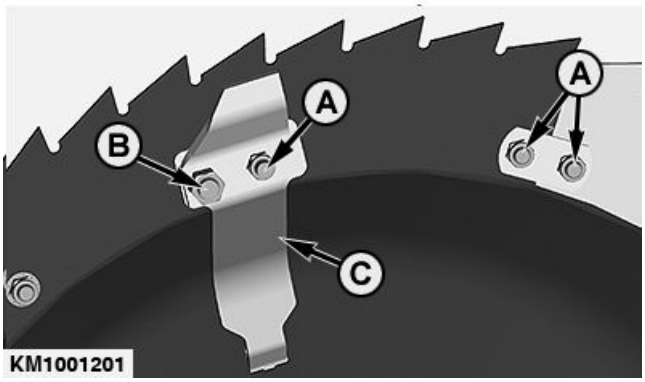
**IMPORTANT: Always use reinforcement plate (C) when installing the cleaners.**

Tighten all attaching screws of blade segments and cleaners with the specified torque.

**Specification**

Screws (M8)—Torque.....28 N·m
20.65 lb.-ft.
Screws (M10)—Torque.....51 N·m
37.62 lb.-ft.

**A—Screws (M8)**
**B—Screws (M10)**
**C—Reinforcement Plate**




KM1001201 —UN—07OCT14

km00321,1681826846337 -19-18APR23-3/3

## Adjusting Divider Points

In order to prevent plugging and crop losses, the divider points (A) have to be properly adjusted.

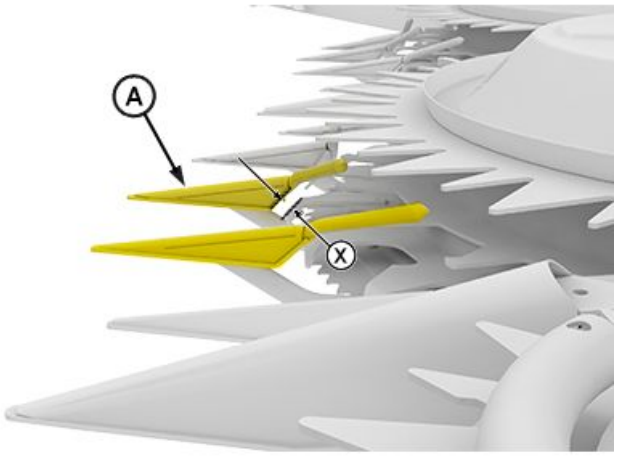
Always keep distance (X) between 3 and 7 mm (0.12 and 0.27 in.).

The specified distance (X) can be adjusted by means of two slot holes (see arrows).

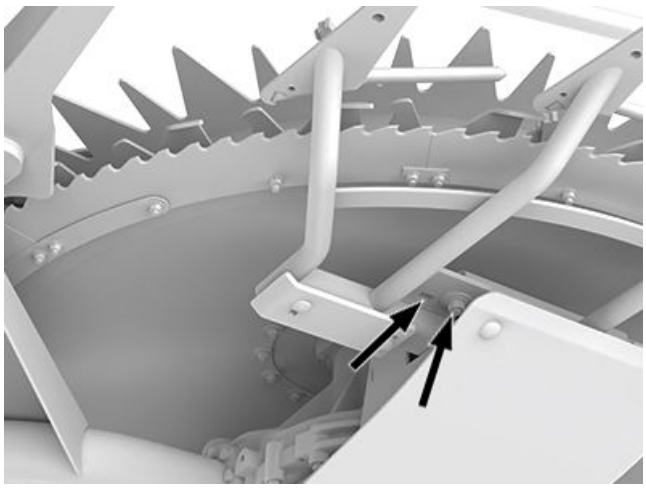
**Specification**

Divider points and big drums—Distance from each other..... 3 to 7 mm
0.12 to 0.27 in.

**A—Divider Point**
**X—3 to 7 mm (0.12 to 0.27 in.)**




KM574680 —UN—28APR23



KM574681 —UN—28APR23

km00321,1681978493000 -19-28APR23-1/1

## Adjusting Divider Points (Small Drums, 475pro Only)

In order to prevent plugging and crop losses, the divider points (A) have to be properly adjusted.

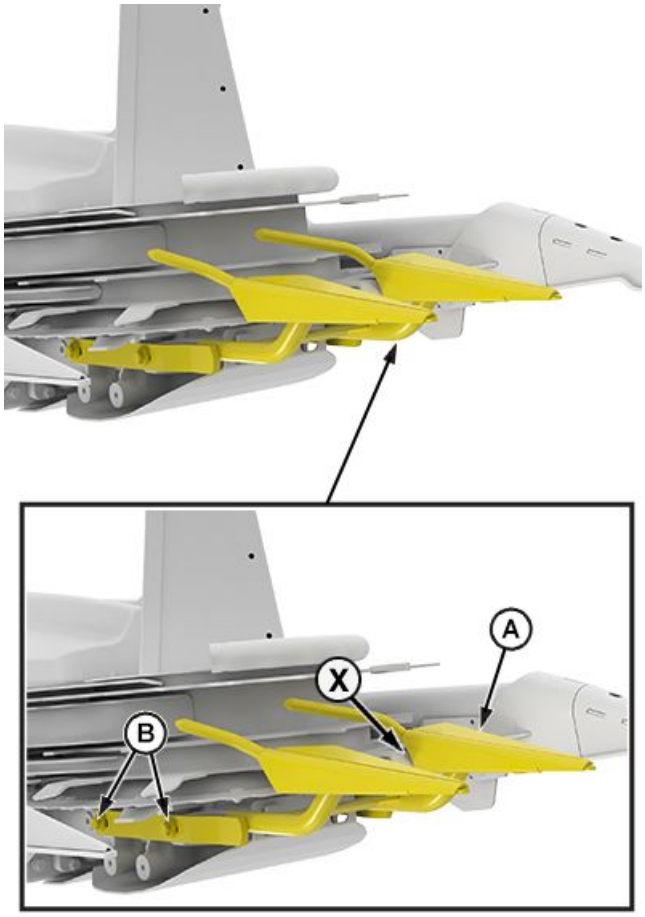
Always keep distance (X) between divider point and drum from 3 through 7 mm (0.12 and 0.27 in.). Proceed as follows:

- Loosen screws (B), set divider point (A) to the specified distance (X) and then retighten screws (B).

| Specification | |
|---|---|
| Divider points and small drums—Distance from each other | 3—7 mm 0.12—0.27 in. |

**A—Divider Point**
**B—Screws**

**X—3—7 mm (0.12—0.27 in.)**




KM575581 —UN—02MAY23

km00321,1681978652919 -19-28APR23-1/1

## Checking Adjustment of Scrapers

In order to prevent plugging in the feeding channel, set scrapers (A) as close as possible to the gathering drums. The scrapers might touch the drums slightly.

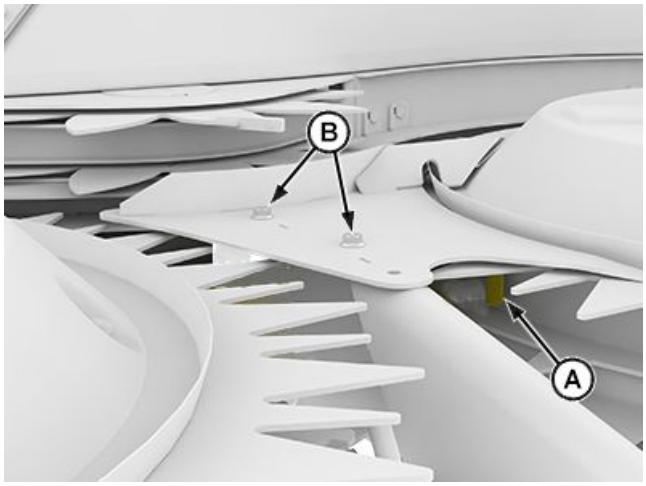
To adjust scraper (A), loosen screws (B) and (C).

*NOTE: Screw (C) is located underneath the machine.*

Set scraper (A) as close as possible to the gathering drum.

Retighten screws (B) and (C).

**A—Scraper**
**B—Screw**
**C—Screw**




KM575573 —UN—28APR23




KM575574 —UN—28APR23

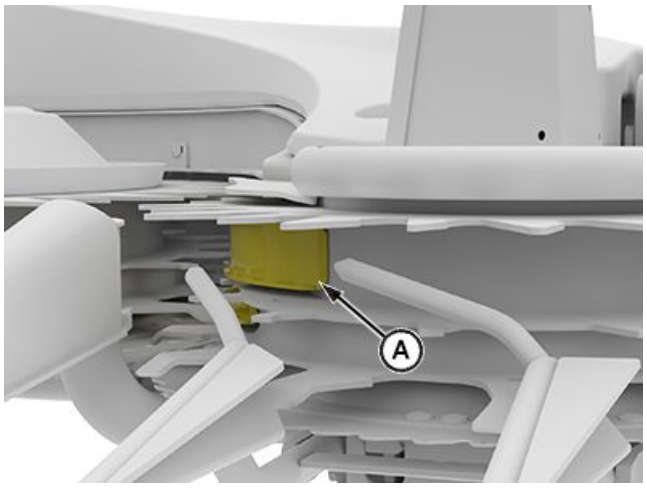
km00321,1681979600353 -19-28APR23-1/1

## Checking Adjustment of Scrapers (Outer Drums)

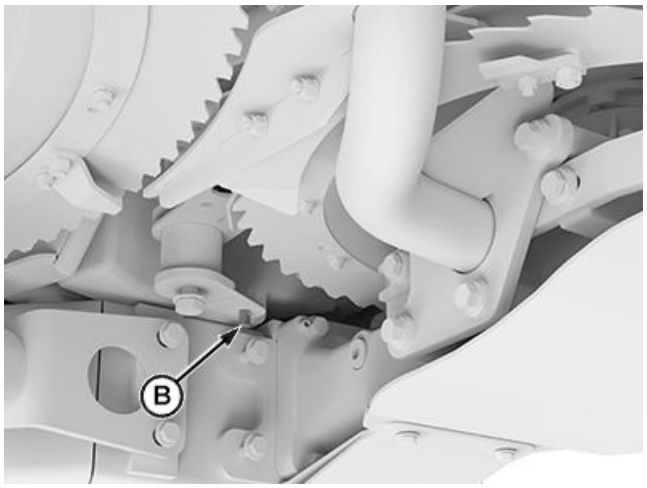
In order to prevent plugging in the feeding channel, set scrapers (A) as close as possible to the gathering drums. The scrapers might touch the drums slightly.

The scraper (A) is adjustable thanks to slot holes (B).

**A—Scraper** **B—Slot Hole**




KM575575 —UN—28APR23




KM575576 —UN—28APR23

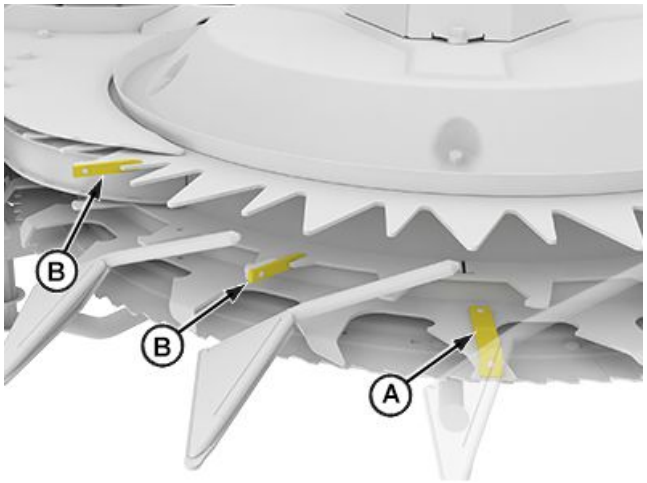
km00321,1681978652884 -19-28APR23-1/1

## Checking Cleaners

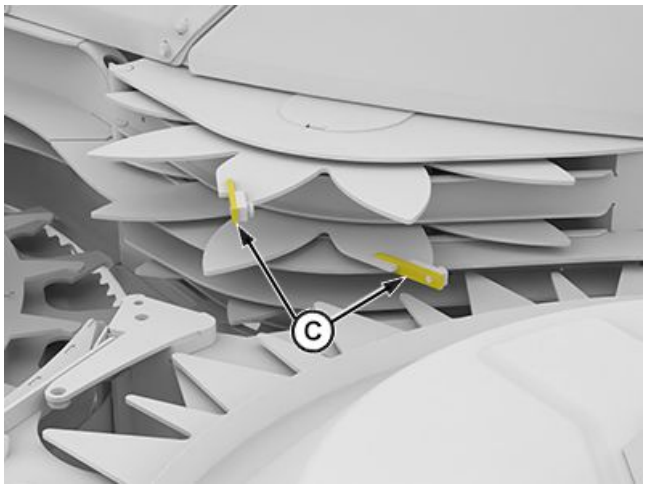
Check condition of the cleaners (A), (B), and (C) frequently, replace if necessary.

Damaged cleaners unnecessarily burden the drive and may cause malfunction of the rotary harvesting unit.

**A—Cleaner**
**B—Cleaner**
**C—Cleaner**




KM575577 —UN—28APR23




KM575578 —UN—28APR23

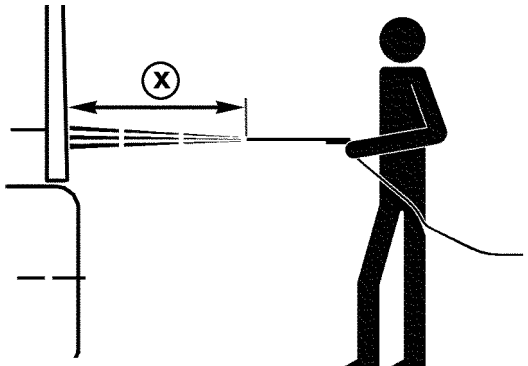
km00321,1682688230081 -19-28APR23-1/1

## Cleaning Rotary Harvesting Unit

Remove loose crop by means of compressed air and/or a hand brush.

When using high pressure/steam cleaners, keep a minimum distance (X) of 250 mm (9.84 in.). Refer to specifications for the maximum temperature and maximum pressure.

| Specification | |
|---|---|
| High pressure/steam cleaner—Max. temperature | 50 °C (122 °F) |
| High pressure/steam cleaner—Max. pressure | 8000 kPa (80 bar; 1160 psi) |




KM1000798

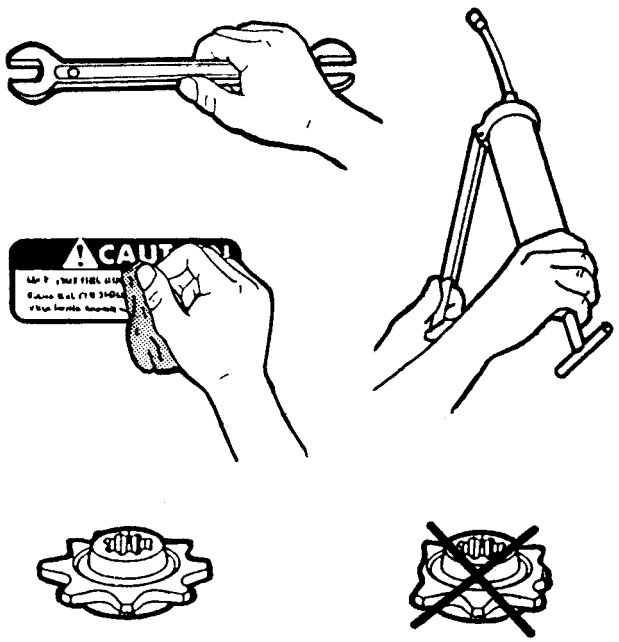
KM1000798 —UN—09MAR09

**X—250 mm (9.84 in.)**

jzsgtac,1679473094356 -19-22MAR23-1/1

## Storage at End of Harvesting Season

- Store the rotary harvesting unit in a dry place. If possible, store on level surface.
- Clean the rotary harvesting unit carefully and check all the slip clutches. Make any re-adjustments that may be necessary. In the Service Section, see Relieve Pressure on the Main Drive Slip Clutches.
- Lubricate the rotary harvesting unit or drain oil as indicated.
- Check the rotary harvesting unit for damaged or worn parts and replace them as necessary. For more detailed checks, see your KEMPER dealer.
- Touch up the paintwork if required, and clean the decals.



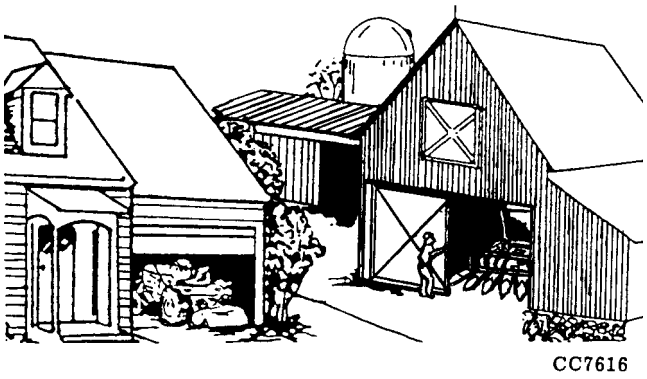
KM1000902

KM1000902 —UN—12JUN09

jzsgtac,1679473134189 -19-22MAR23-1/1

## Start of New Season

- If necessary, thoroughly clean the rotary harvesting unit.
- Lubricate the rotary harvesting unit and perform any service work that is due before the start of the harvesting season. See “Lubrication and Periodic Service”.
- Check tightness of all hardware.
- Check that the outer units of the rotary harvesting unit can be unfolded and folded correctly.
- Review your operator's manual.



CC7616

CC7616 —UN—21MAR95

OUKM001,0000016 -19-15FEB05-1/1

# Specifications

## Machine Design Life

This machine is designed and manufactured to provide a long life of productive operation. However, actual attainable life depends on a number of factors including the severity of working conditions and completion of recommended maintenance. (See the Service section of this manual.)

Periodically inspect and review the machine in conjunction with your KEMPER dealer. The review may result in recommendations for service, component repair, remanufacture or replacement, or, if at the end of life, that the machine be removed from operation. (See separate decommissioning section of this manual for information on disposal and recycling of machine components.)

No machine should be operated if safety-related components are missing or in need of service. All missing or damaged safety-related components, including safety signs, should be repaired or replaced before operating.

km00321,1682433410408 -19-25APR23-1/1

## 460pro Rotary Harvesting Unit

| | |
|---|---|
| Drive system | oil-bath gear box with safety clutch |
| Harvesting system | 4 fast rotating blades |
| Crop conveyor | four slowly rotating gathering drums, two oblique feed drums |
| Weight with basic equipment | |
| 460$^{pro}$ for Claas forage harvesters | 3000 kg (6614 lb.) |
| 460$^{pro}$ for Fendt forage harvesters | 2850 kg (6283 lb.) |
| Width | |
| Transport width | 3,00 m (9 ft. 10.1 in.)[a] |
| Working width | 6,00 m (19 ft. 8.2 in.)[a] |
| Overall width | 6,00 m (19 ft. 8.2 in.)[a] |
| Height | |
| Working Height | 1.81 m (5 ft. 11.3 in.)[a] |
| Transport Height | 2.90 m (9 ft. 6.2 in.)[a] |
| Length | 2,60 m (8 ft. 6.4 in.)[a] |
| Maximum operating speed | 15 km/h (9.32 mph) |

[a] *All dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.*

km00321,1683112699496 -19-11OCT23-1/1

## 475pro Rotary Harvesting Unit

| | |
|---|---|
| Drive system | oil-bath gear box with safety clutch |
| Harvesting system | 6 fast rotating blades<br>For 8 wide rows or 10 narrow rows |
| Crop conveyor | 4 slowly rotating big gathering drums, 2 slowly rotating small gathering drums, 2 cross-feed drums and 2 oblique feed drums |
| Weight with basic equipment | |
| 475pro for Claas forage harvesters | 3750 kg (8267 lb.) |
| 475pro for Fendt forage harvesters | 3550 kg (7826 lb.) |
| Width | |
| Transport width | 3,30 m (10 ft. 9.9 in.)[a] |
| Working width | 7,50 m (24 ft. 7.2 in.)[a] |
| Overall width | 7.55 m (24 ft. 9.2 in.)[a] |
| Height | 1.52 m (4 ft. 11.8 in.)[a] |
| Length | 2.78 m (9 ft. 1.4 in.)[a] |
| Maximum operating speed | 15 km/h (9.32 mph) |

[a] *All dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.*

km00321,1683112450638 -19-11OCT23-1/1

## 490pro Rotary Harvesting Unit

| | |
|---|---|
| Drive system | oil-bath gear box with safety clutch |
| Harvesting system | 6 fast rotating blades |
| Crop conveyor | 6 slowly rotating feeder house drums, 2 cross feed drums and 2 oblique feed drums |
| Weight with basic equipment | |
| 490pro for Claas forage harvesters | 4200 kg (9259 lb.) |
| 490pro for Fendt forage harvesters | 4050 kg (8929 lb.) |
| Width | |
| Transport width | 3,00 m (9 ft. 10 in.)[a] |
| Working width | 9,00 m (29 ft. 6.3 in.)[a] |
| Overall width | 9,02 m (29 ft. 7.1 in.)[a] |
| Height | 1,98 m (6 ft. 5.95 in.)[a] |
| Length | 2,70 m (8 ft. 10.3 in.)[a] |
| Maximum operating speed | 12 km/h (7.46 mph) |

[a] *All dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.*

km00321,1683112801643 -19-11OCT23-1/1

## Sound Level

Max. sound level at operator's ear in accordance with DIN ISO 11204. Measurement method in accordance with ISO 5131 with rotary harvesting unit attached to the forage harvester and cab closed (average value):

| | |
|---|---|
| 460pro | 76.1 dB(A) |
| 475pro | 76.1 dB(A) |
| 490pro | 76.1 dB(A) |

km00321,1681983372311 -19-20APR23-1/1

## EU Declaration of Conformity

**Maschinenfabrik Kemper GmbH & Co. KG**
**Breul**
**D-48703 Stadtlohn, Germany**

The undersigned hereby declares that:

**Machine Type:** Rotary Harvesting Units

**Models:** 460$^{pro}$, 475$^{pro}$, 490$^{pro}$

fulfill(s) all relevant provisions and essential requirements of the following directives:

| DIRECTIVE | NUMBER | CERTIFICATION METHOD |
|---|---|---|
| Machinery directive | 2006/42/EC | Self-certification |

The product is in conformity with the following standards and/or other normative documents:

| | |
|---|---|
| Agricultural Machinery Safety—Part 1 | EN ISO 4254-1:2015 |
| Agricultural Machinery Safety—Part 7 | EN ISO 4254-7:2017 |
| Agricultural Machinery Safety—Part 12 | EN ISO 4254-12:2012 |
| Machine safety | EN ISO 12100:2010 |
| Safety of Power take-off (PTO) drive shafts and their guards | EN 12965:2019 |

Name and address of the person in the European Community authorized to compile the technical construction file:

Maschinenfabrik KEMPER GmbH & Co. KG
Customer Support
Breul
D-48703 Stadtlohn, Germany
service@kemper-stadtlohn.de

This declaration of conformity is issued under the sole responsibility of the manufacturer.

**Place of Declaration:** 48703 Stadtlohn, Germany

**Date of Declaration:** 01 September 2024

**Manufacturing Unit:** Kemper, Stadtlohn, Germany

DXCE01 —UN—28APR09

KM510637 —UN—18JUN21

CE

*Richard Wübbels, Manager Product Engineering*

km00321,1681983721971 -19-05MAR25-1/1

## UK Declaration of Conformity

**Maschinenfabrik Kemper GmbH & Co. KG**
**Breul**
**D-48703 Stadtlohn, Germany**

The undersigned hereby declares that:

**Machine Type:** Rotary Harvesting Units

**Model:** 460$^{pro}$, 475$^{pro}$, 490$^{pro}$

fulfill(s) all relevant provisions and essential requirements of the following UK regulations:

| REGULATION | NUMBER | CERTIFICATION METHOD |
|---|---|---|
| Machinery Directive | S.I. 2008/1597 | Self-certification |

The product is in conformity with the following standards and/or other normative documents:

| | |
|---|---|
| Agricultural Machinery Safety—Part 1 | EN ISO 4254-1:2015 |
| Agricultural Machinery Safety—Part 7 | EN ISO 4254-7:2017 |
| Agricultural Machinery Safety—Part 12 | EN ISO 4254-12:2012 |
| Machine safety | EN ISO 12100:2010 |
| Safety of Power take-off (PTO) drive shafts and their guards | EN 12965:2019 |

Name and address of the person authorized to compile the technical construction file:

Maschinenfabrik KEMPER GmbH & Co. KG
Customer Support
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This declaration of conformity is issued under the sole responsibility of the manufacturer.

**Place of Declaration:** 48703 Stadtlohn, Germany

**Date of Declaration:** 01 September 2023

**Manufacturing Unit:** Kemper, Stadtlohn, Germany

RXA0179545 —UN—16APR21

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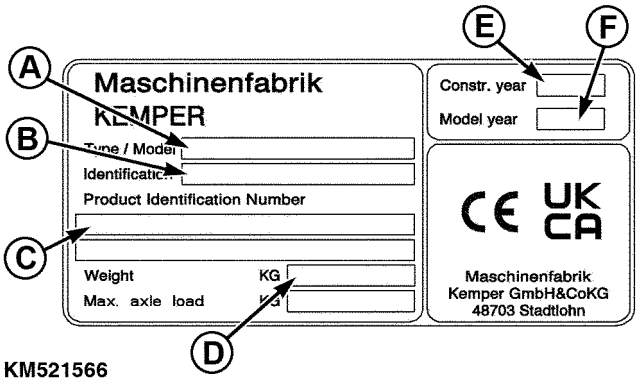
UK CA

*Richard Wübbels, Manager Product Engineering*

km00321,1681983846298 -19-05MAR25-1/1

## Rotary Harvesting Unit Serial Number Plate

**A—Type**
**B—Model designation**
**C—Product identification number**
**D—Weight**
**E—Year of construction**
**F—Model year**



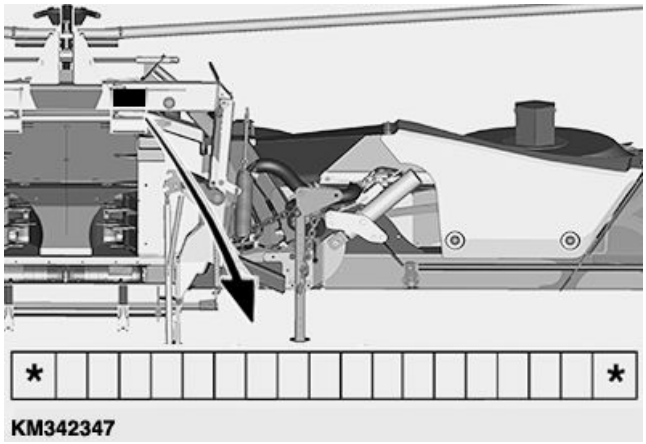

KM521566

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km00321,1697030610106 -19-11OCT23-1/1

## Serial Number

When ordering parts, always quote the rotary harvesting unit serial number. The serial number is on a plate at the right-hand side of the attaching frame. Record the serial number in the space provided opposite.




KM342347

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