

Rotary Harvesting Units

345^{plus}

360^{plus}

375^{plus}

390^{plus}



OPERATOR'S MANUAL

**345plus, 360plus, 375plus, and 390plus
Rotary Harvesting Units**

OMKM122361 ISSUE J0 (ENGLISH)

Maschinenfabrik Kemper GmbH & Co. KG

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Introduction

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 MUST NOT be operated in the United States and Canada.

KM00321,000070F -19-20DEC17-1/1

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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 ILLUSTRATION™ Manual

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Pre-delivery Inspection

Predelivery Checklist

After the rotary harvesting unit has been completely assembled, inspect it to be sure it is in good running order before delivering it to the customer. Check off each item when found satisfactory or after making the necessary adjustments.

- ☐ All shields open and close freely.
- ☐ Rotary harvesting unit has been properly assembled.
- ☐ Parts delivered separately have been properly installed.
- ☐ Nuts on all screws have been tightened.
- ☐ All grease fittings have been lubricated.
- ☐ Gear cases have been properly filled (see Lubrication and Maintenance).
- ☐ Knife attaching screws are tightened correctly.

- ☐ Shipping brackets removed.
- ☐ Rotary harvesting unit can be folded correctly.
- ☐ Rotary harvesting unit has been cleaned and touched up wherever paint is nicked or scratched.
- ☐ All moving parts are working freely.
- ☐ Check all friction clutches as shown in the Service section.
- ☐ All decals are in place and in good condition.
- ☐ Check that auxiliary lights are installed on basic harvester.
- ☐ This rotary harvesting unit has been tested and, to the best of my knowledge, is ready for delivery to the customer.

(Date Tested)

(Signature of Technician)

KM00321,00001F6 -19-13AUG09-1/1

Delivery Checklist

The following checklist is a reminder of very important information that should be conveyed directly to the customer upon delivery of the machine.

- ☐ Advise the customer that the life expectancy of this or any other machine depends on regular lubrication as described in this operator's manual.
- ☐ Discuss proper operation of the rotary harvesting unit as well as the procedures and methods required for the best harvest.
- ☐ Give the Operator's Manual to the customer and explain all operating adjustments.
- ☐ Advise the customer of the proper weights and fluids that must be used in the tires, depending upon the individual forage harvester.

- ☐ Rotary harvesting units for type 498 Claas forage harvesters only: Program module A130FAM for the variable header drive (optional equipment).
- ☐ Advise the customer of safety precautions that must be observed while using the rotary harvesting unit.
- ☐ Invite the customer to stop by and discuss any problems that may be encountered while operating the rotary harvester unit.
- ☐ Tell the customer to record the serial number of his rotary harvesting unit in the space provided at the end of this manual.
- ☐ Remove this page and file it safely.

(Signature of Technician)

(Signature of Customer)

KM00321,00008BA -19-26FEB19-1/1

After-Sale Checklist

The following items should be checked sometime during the first season of operation with the rotary harvesting unit.

- ☐ Go over the entire machine for loose or missing nuts and bolts.
- ☐ All safety shields are in place and fastened securely.
- ☐ Check for broken or damaged parts.
- ☐ If possible, run the rotary harvesting unit to see if it is functioning properly.
- ☐ Check for worn rotary knives.
- ☐ Check with the customer as to the performance of the rotary harvesting unit thus far.
- ☐ Make sure the customer understands the best methods of rotary harvesting unit operation.
- ☐ Review the entire operator's manual together with your customer and stress the importance of proper and regular lubrication, as well as safety precautions.

(Signature of Technician)

(Signature of Customer)

ZX,CHECK676,C -19-20JAN95-1/1

Identification View

Identification View



KM1001176 —UN—30MAR10

390^{plus} Rotary Harvesting Unit Shown

KM00321.000030D -19-14JUN10-1/1

Safety Measures

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 -19-29SEP98-1/1

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

KM00321,000016B -19-14MAY09-1/1

Understand Signal Words

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.



TS187 —19—30SEP98

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

Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.



H28930 — UN—30JUN89

FX,ROAD -19-01MAY91-1/1

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.

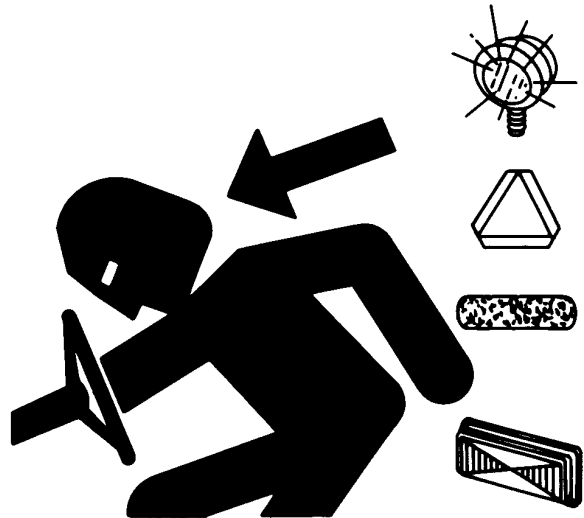
- Never allow a child or an untrained person to operate the machine. Instruct all operators not to give children a ride on the machine or an attachment.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.

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

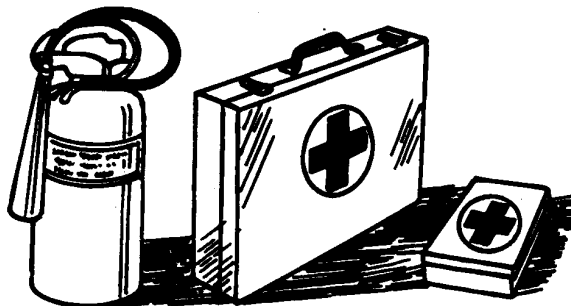
KM00321,000016C -19-14MAY09-1/1

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

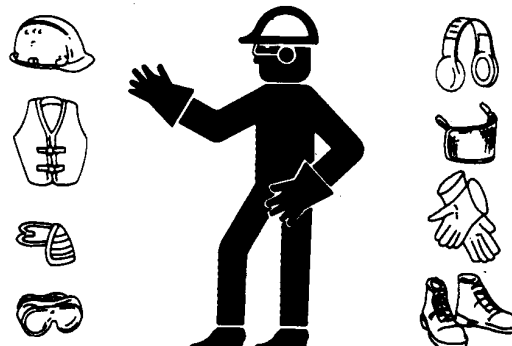
Wear Protective Clothing

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

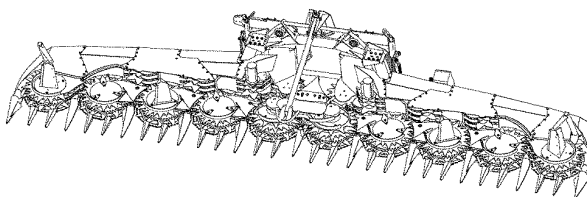
Check Machine Safety

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

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

Avoid entanglement

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



KM204388

KM204388 —UN—14FEB14

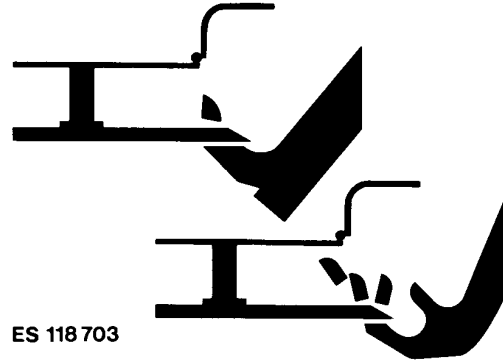
KM00321,00002E3 -19-28MAR14-1/1

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

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 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.



TS218 —UN—23AUG88

DX,SERV -19-17FEB99-1/1

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.



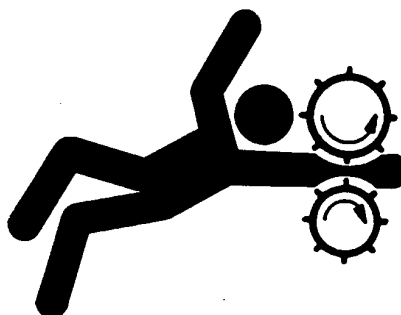
TS1644 —UN—22AUG95

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

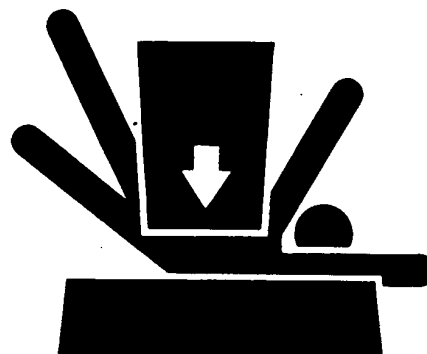
DX,LOOSE -19-04JUN90-1/1

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

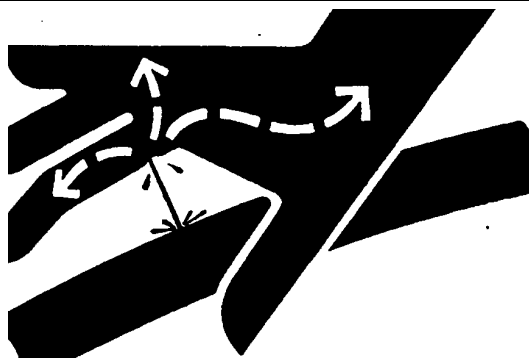
Avoid High-Pressure Fluids

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

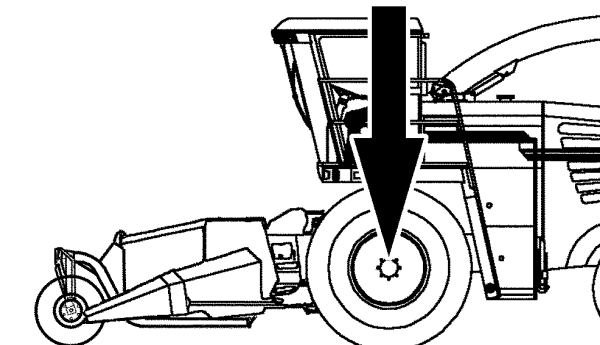
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Observe Maximum Permissible Front Axle Load

Transport of the 375^{plus} and 390^{plus} rotary harvesting units on public roads with the forage harvesters is only permissible if the maximum front axle load of 11500 kg (25353 lb.) is observed.

The maximum permissible front axle load can be observed by attaching the Comfort support wheel.

If the maximum permissible front axle load is not observed, this will result in loss of permission to drive on public roads and may cause serious personal injury and machine damage.

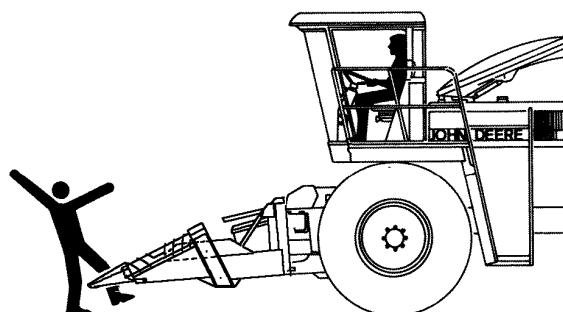


KM1000915 —UN—29JUL09

KM00321,0000446 -19-15MAY15-1/1

Transport with Harvesting Unit Installed

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



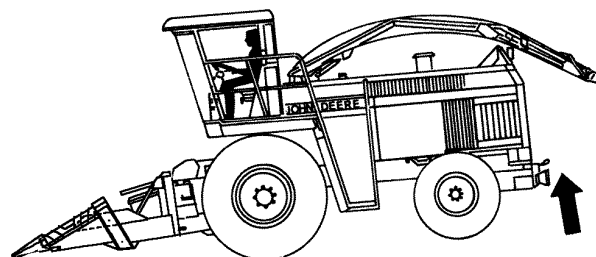
ZX007219

ZX007219 —UN—21MAR95

ZX,HEADER676 -19-20JAN95-1/1

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.



ZX007220

ZX007220—UN—21MAR95

ZX,WEIGHT676 -19-20JAN95-1/1

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.



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

TS220—UN—15APR13

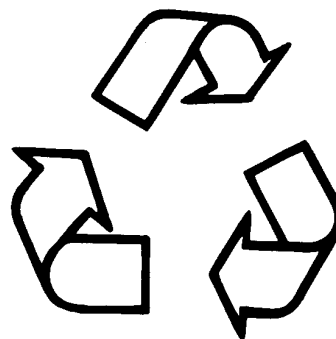
Dispose of Waste Properly

If waste disposal is carried out improperly, this may damage the environment and ecological systems. Potentially harmful waste used with KEMPER equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down the drain, or into any water source.

Air-conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air-conditioning service center to recover and recycle used air-conditioning refrigerants.



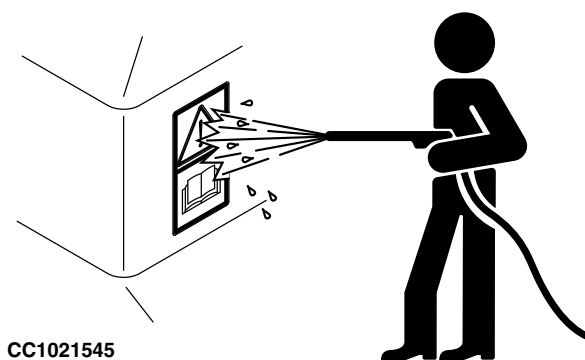
KM00321,000016E -19-14MAY09-1/1

TS1133—UN—15APR13

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

CC102 1545 —UN—23APR02

KM00321,00002BB -19-31MAR10-1/1

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 -19-19NOV91-1/1

Replace Safety Signs

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

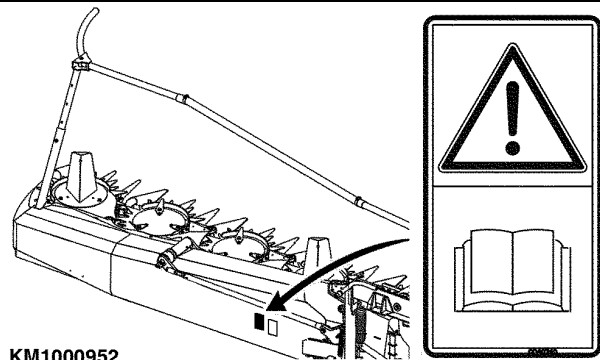


TS201 —UN—15APR13

DX,SIGNS1 -19-04JUN90-1/1

Operator's Manual

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

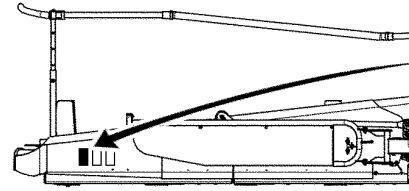


KM1000952 —UN—13AUG09

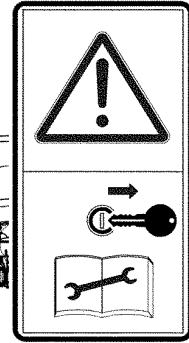
KM00321,00001FB -19-13AUG09-1/1

Repair and Maintenance

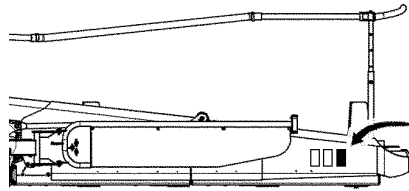
Before carrying out repair and maintenance work, shut off engine and remove key.



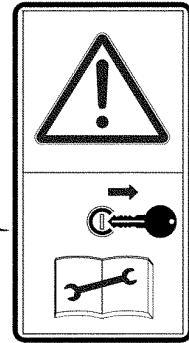
KM1000953



KM1000953 —UN—13AUG09



KM1000954



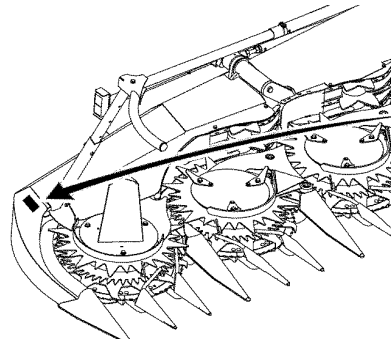
KM1000954 —UN—13AUG09

KM00321,00001FC -19-13AUG09-1/1

Rotating Blades

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

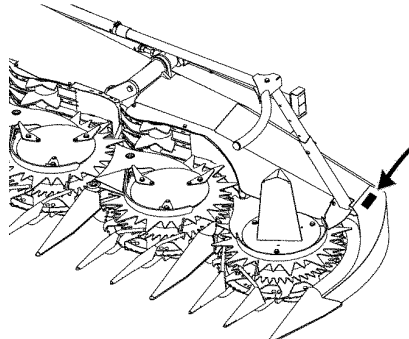
The rotating blades are not immediately stopped when the machine is shut down.



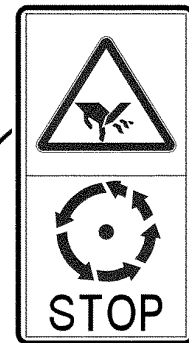
KM1001210



KM1001210 —UN—14JUN10



KM1001211



KM1001211 —UN—14JUN10

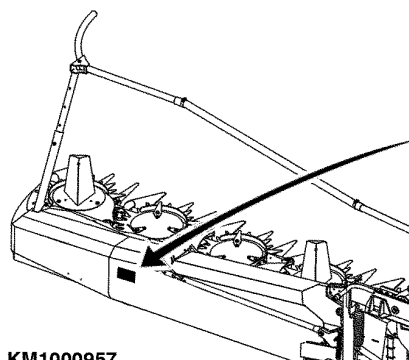
KM00321,00002E2 -19-08JUN10-1/1

Folding Area

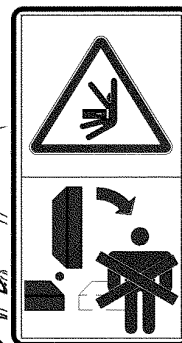
Stay clear of the folding area of the rotary harvesting unit.

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

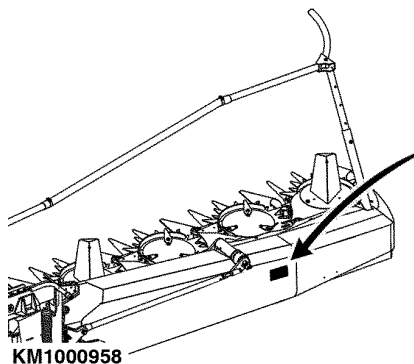
Before folding or unfolding, ensure that all persons keep the required safety distance from the rotary harvesting unit.



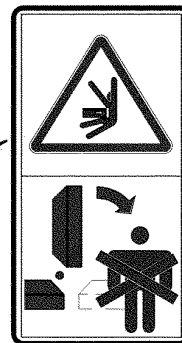
KM1000957



KM1000957 —UN—14AUG09



KM1000958



KM1000958 —UN—14AUG09

KM00321,00001FE -19-14AUG09-1/1

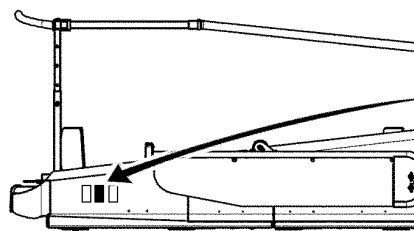
Rotating Drums

Stay clear of rotating drums to avoid personal injury.

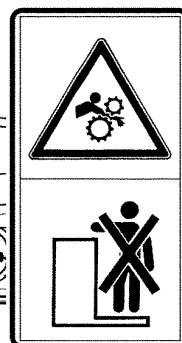
Arms, legs or loose clothing might become caught by the rotating drums when in operation.

Always keep the required safety distance from the rotating drums.

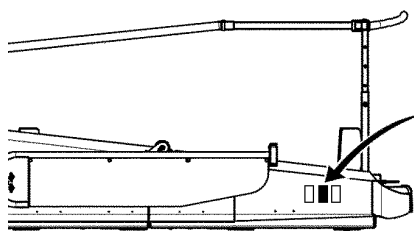
Wait until all moving parts have stopped.



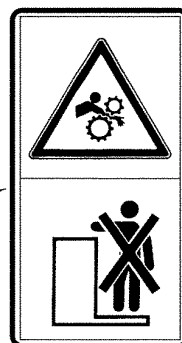
KM1000959



KM1000959 —UN—14AUG09



KM1000960

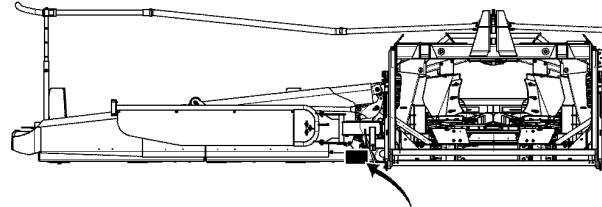


KM1000960 —UN—14AUG09

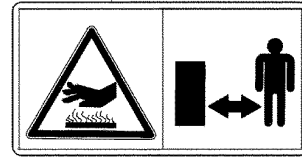
KM00321,00001FF -19-14AUG09-1/1

Input Transmission

Stay clear of hot surfaces.



KM1002322

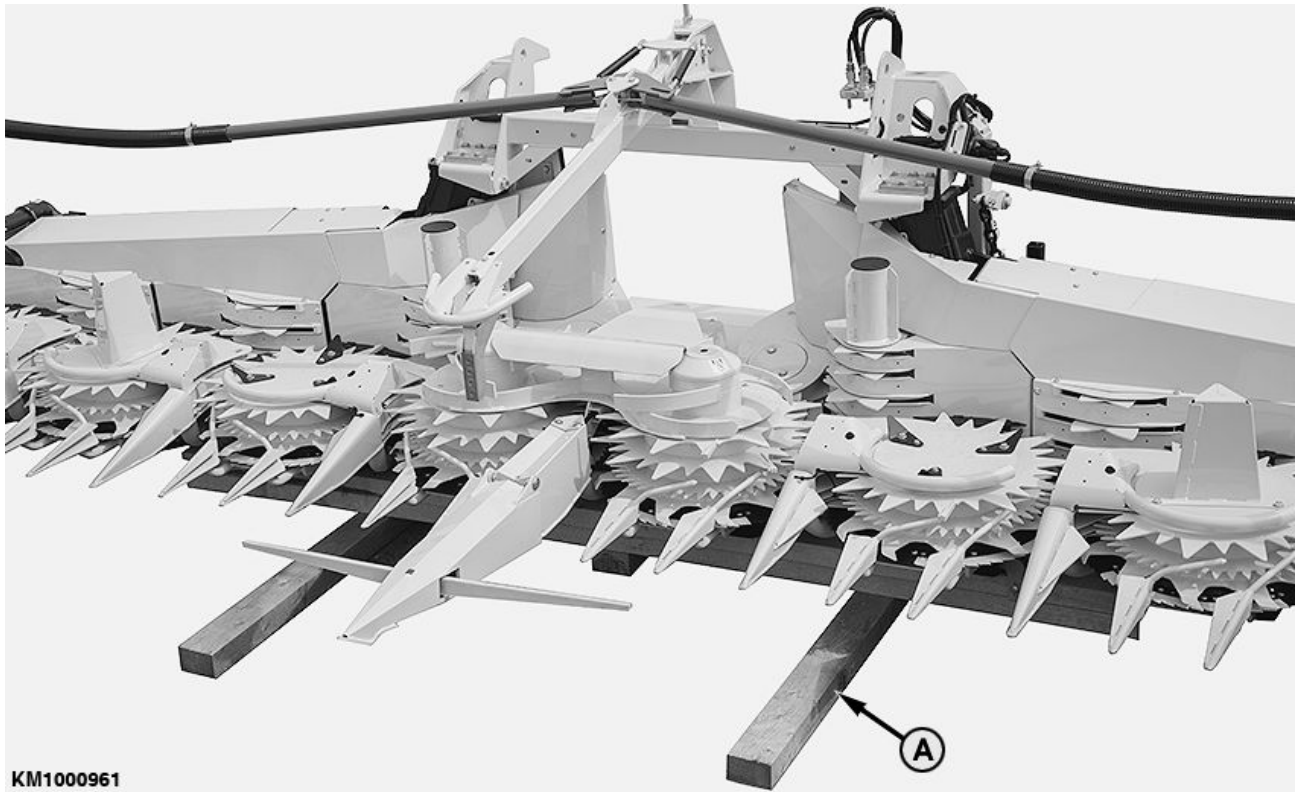


KM1002322 —UN—22JUN12

KM00321,000018D -19-22JUN12-1/1

Haulage

Transport Pallet



A—Transport pallet

Whenever the rotary harvesting unit is hauled separately on a flatbed carrier, always fit the transport pallet (A) supplied!

After the transport pallet (A) is fitted, the rotary harvesting unit can be loaded with a fork lift.

CAUTION: Make sure that fork lift meets the weight requirements of the rotary harvesting unit (see Specifications Section.)

KM00321,0000201 -19-14AUG09-1/1

KM1000961 —UN—10JUL 17

Loading with a Crane

NOTE: Remove spiral conveyors (A) for access to the hanging points.

When reinstalling spiral conveyors (A), pay attention to the correct installation position. Do not swap spiral conveyors!

Models 375^{plus} and 390^{plus} must be unfolded to use the hanging points underneath the spiral conveyors (A).

CAUTION: When loading the rotary harvesting unit with a crane, always use the hanging points. This will prevent the machine from toppling over.

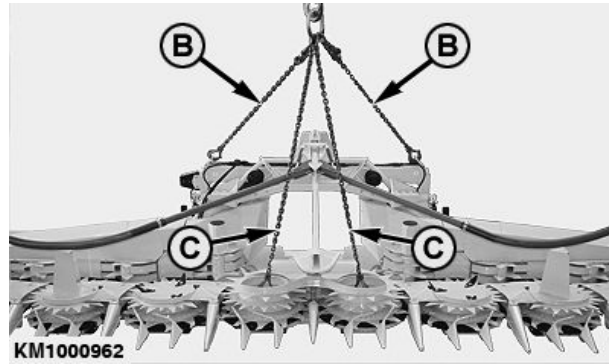
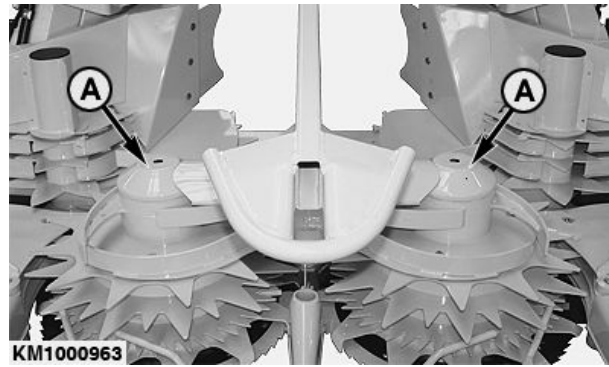
Make sure to use chains or slings that meet the weight requirements of the rotary harvesting unit (see Specifications Section).

When loading in this way, you must pay extreme attention and use additional securing chains if necessary.

When loading the rotary harvesting unit with a crane, chains or slings with the relevant length must be used as shown on illustration.

A—Spiral Conveyors
B—1500 mm (4 ft. 11.05 in.)

C—1900 mm (6 ft. 2.80 in.)



KM1000963 —UN—14AUG09

KM1000962 —UN—14AUG09

KM00321,00003C7 -19-17JAN11-1/1

Loading Rotary Harvesting Unit on a Truck or Trailer



A—Transport Pallet

B—Rubber Pad

IMPORTANT: When loading the rotary harvesting unit on a truck or trailer, always use transport pallet (A) supplied with the machine.

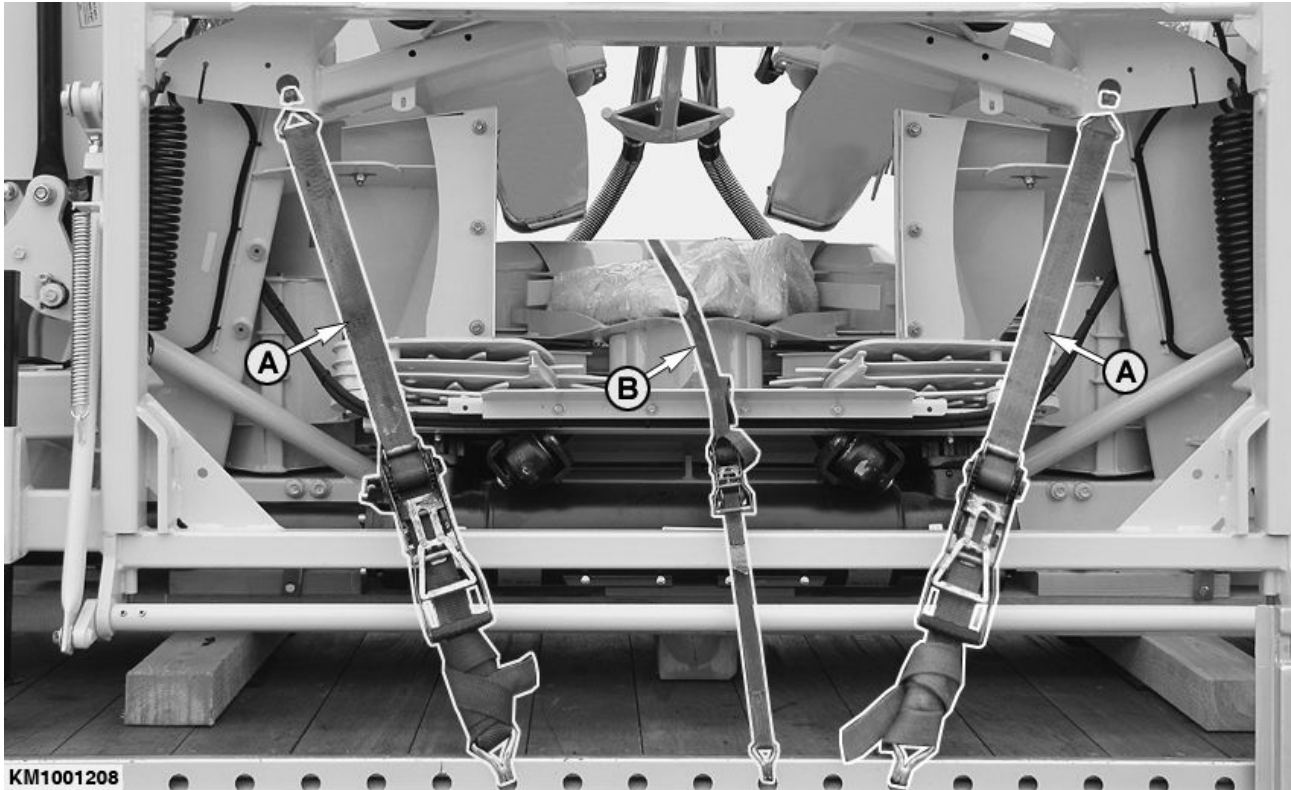
When loading the machine on a trailer, pay attention to the following:

- Position a fork lift under transport pallet (A) as shown.

- Place slip-resistant rubber pads (B) under transport pallet (A).
- Place rotary harvesting unit on trailer and secure. See Secure Rotary Harvesting Unit (Lashing Points) in this Section.

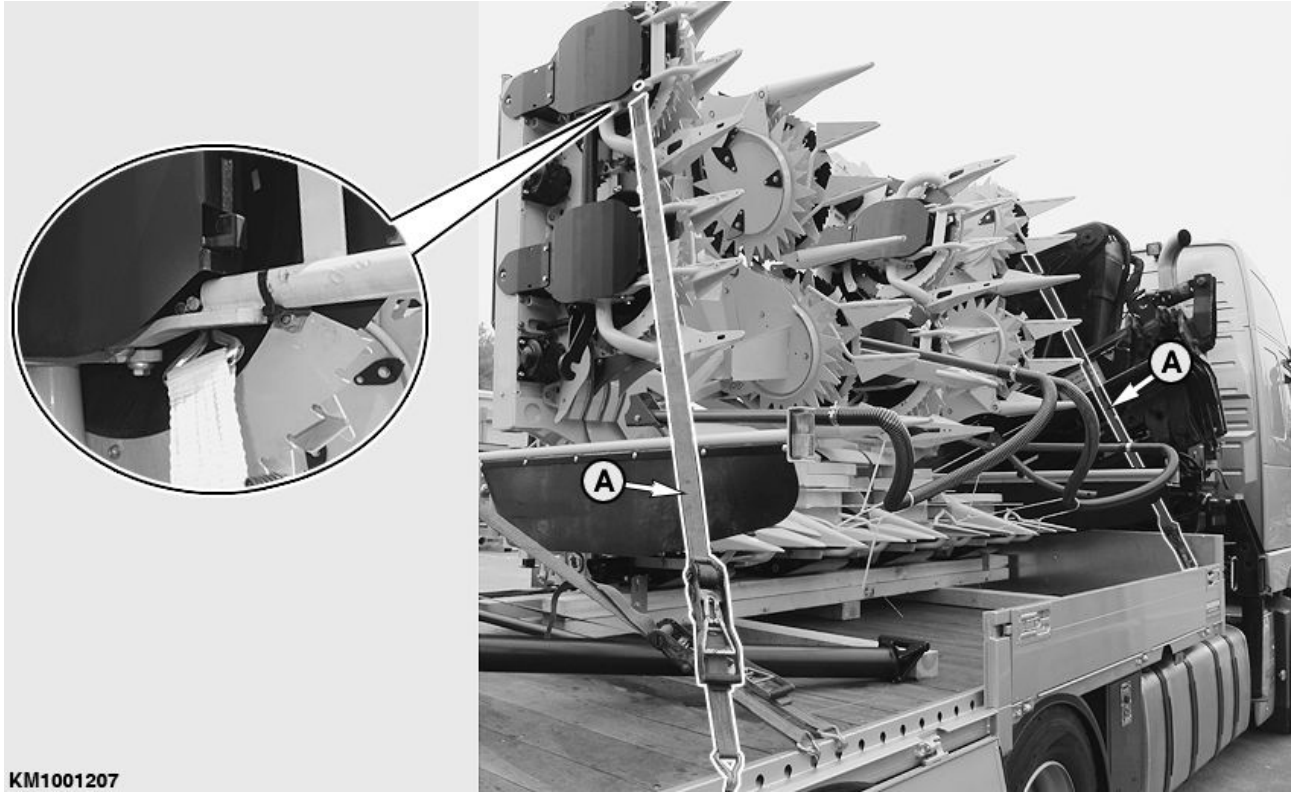
KM00321,00002E0 -19-20MAY10-1/1

Secure Rotary Harvesting Unit (Lashing Points)



KM1001208 —UN—20MAY10

Lashing Points



KM1001207 —UN—20MAY10

Lashing Points

A—Tensioner Straps

B—Tensioner Strap

Continued on next page

KM00321,00002E1 -19-20MAY10-1/2

Haulage

Secure the rotary harvesting unit on both sides as shown using tensioner straps (A).

Secure accessories using an additional tensioner strap (B).

KM00321,00002E1 -19-20MAY10-2/2

Attaching to a CLAAS Forage Harvester

Compatibility Chart

The chart below gives the compatibility between rotary harvesting unit and forage harvester.

Rotary Harvesting Unit/Harvester Compatibility

345 ^{plus}	830 Type 492/493 840 Type 492/496/500 850 Type 492/493/496/500 860 Type 496/500 870 Type 492/493/496/500 890 Type 492/493 900 Type 492/493 930 Type 494/497/498/502 940 Type 494/497/498/502 950 Type 494/497/498/502 960 Type 494/497/498/502 970 Type 494 980 Type 494
360 ^{plus}	830 Type 492/493 840 Type 492/496/500 850 Type 492/493/496/500 860 Type 496/500 870 Type 492/493/496/500 890 Type 492/493 900 Type 492/493 930 Type 494/497/498/502 940 Type 494/497/498/502 950 Type 494/497/498/502 960 Type 494/497/498/499/502 970 Type 494/497/498/502 980 Type 494/497/498/502 990 Type 494/497/498/499/502
375 ^{plus}	860 Type 496/500 870 Type 496/500 890 Type 492/493 900 Type 492/493 940 Type 497/498/502 950 Type 494/497/498/502 960 Type 494/497/498/499/502 970 Type 494/497/498/502 980 Type 494/497/498/502 990 Type 494/497/498/499/502
390 ^{plus}	960 Type 494/497/498/499/502 970 Type 494/497/498/502 980 Type 494/497/498/502 990 Type 494/497/498/499/502

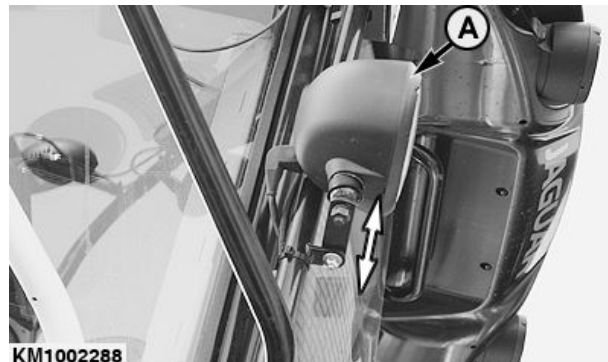
KM00321,0000AF9 -19-02OCT20-1/1

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

KM1002288 —UN—07MAY12

KM00321,00008B5 -19-25FEB19-1/1

Attaching to type 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, which must be matched with Claas. Contact the Claas dealer concerning this.

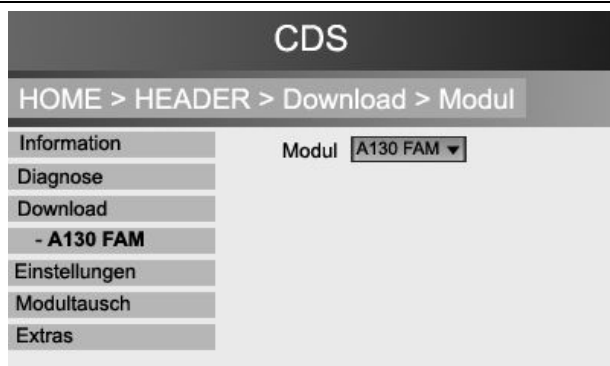
IMPORTANT: To use the variable header drive, module **A130FAM** must be programmed for the header drive. Otherwise, the rotary harvesting unit can only be used with constant speed and the adjustment of the header speed is carried out via the Kemper multi-speed gearbox.

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).

NOTE: Software available on the Claas Module of the rotary harvesting unit must be deleted before programming.

3. Select the A130FAM module for programming the rotary harvesting unit.

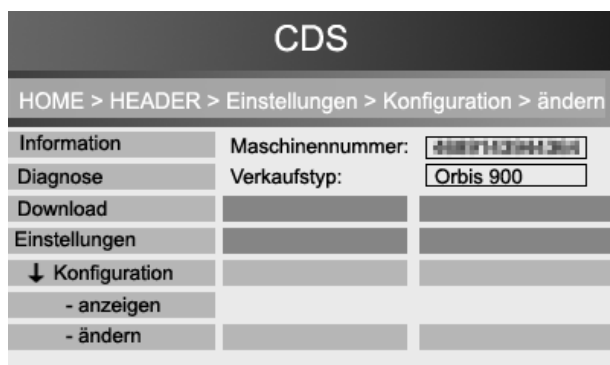


KM359969 — UN — 22FEB19

KM00321,0000AFA -19-05OCT20-1/4

4. When entering a serial number, enter **released by Claas**.

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

Continued on next page

KM00321,0000AFA -19-05OCT20-2/4

IMPORTANT: The following entries must be released by Claas.

5. Use the old Orbis types when selecting the type of machine.

NOTE: For example, in the case of an Orbis 900, select type 992 and not type 153 (see illustration).

6. Depending on the model of the mower attachment, select following settings:

CDS

HOME > HEADER > Download > Modul

Information	Maschinentyp 992 ▼	
Diagnose	657 / 149	ORBIS 450
Download	658 / 150	ORBIS 600
- Modul	151	ORBIS 606
Einstellungen	141 / 154	ORBIS 635
Modultausch	659 / 152	ORBIS 750
Extras	992 / 153	ORBIS 900

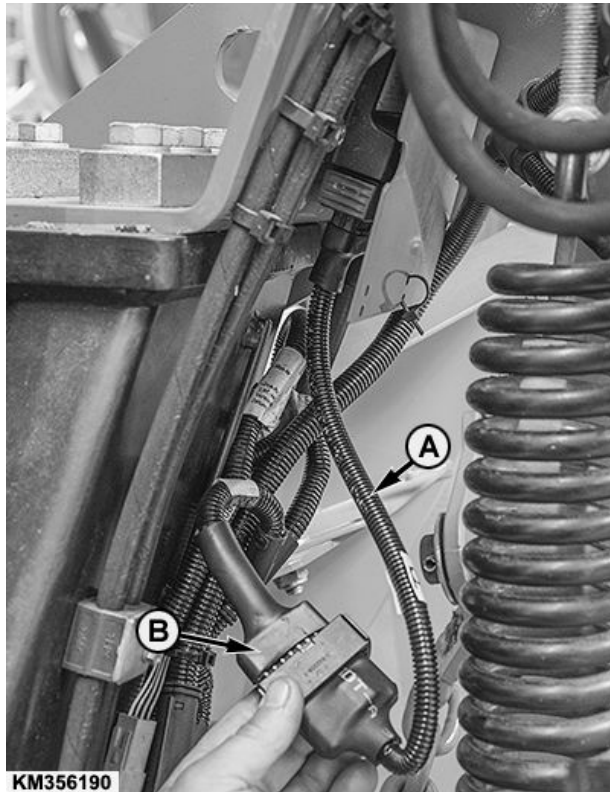
KM359967 —UN—22FEB19

Rotary harvesting unit model	Machine type	Transmission	Transport system
345plus	Orbis 450	3 speed transmission	No transport system
360plus/460plus without chassis	Orbis 600	3 speed transmission	No transport system
360plus/460plus with chassis	Orbis 750	3 speed transmission	Transport wagon
375plus/475plus without chassis	Orbis 750	3 speed transmission	No transport system
375plus/475plus with chassis	Orbis 750	3 speed transmission	Transport wagon
390plus/490plus without chassis	Orbis 900	3 speed transmission	No transport system
390plus/490plus with chassis	Orbis 900	3 speed transmission	Transport wagon

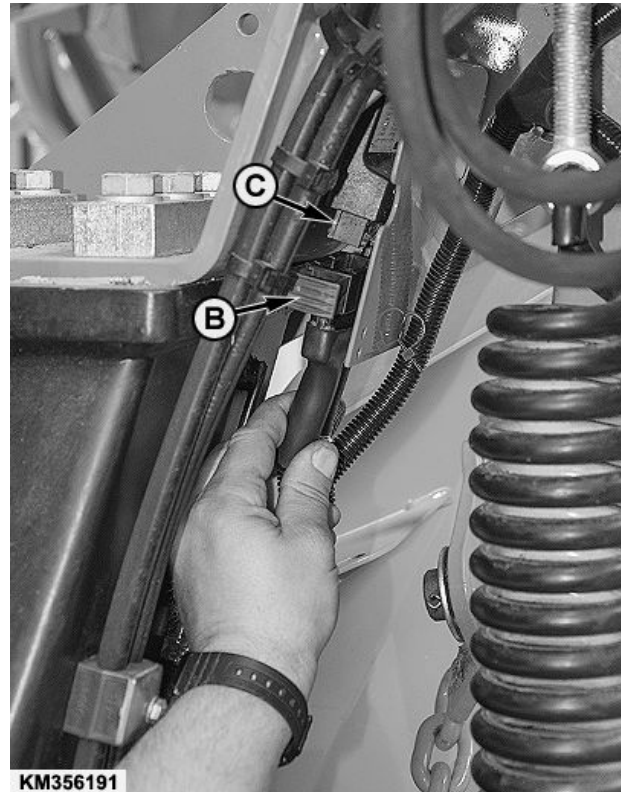
IMPORTANT: Additionally, select the setting "variable drive" for each type.

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KM00321,0000AFA -19-05OCT20-3/4



KM356190 —UN—06/JUL18



KM356191 —UN—06/JUL18

A—Adapter cable
B—Main wiring harness connector

C—Claas-control unit

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

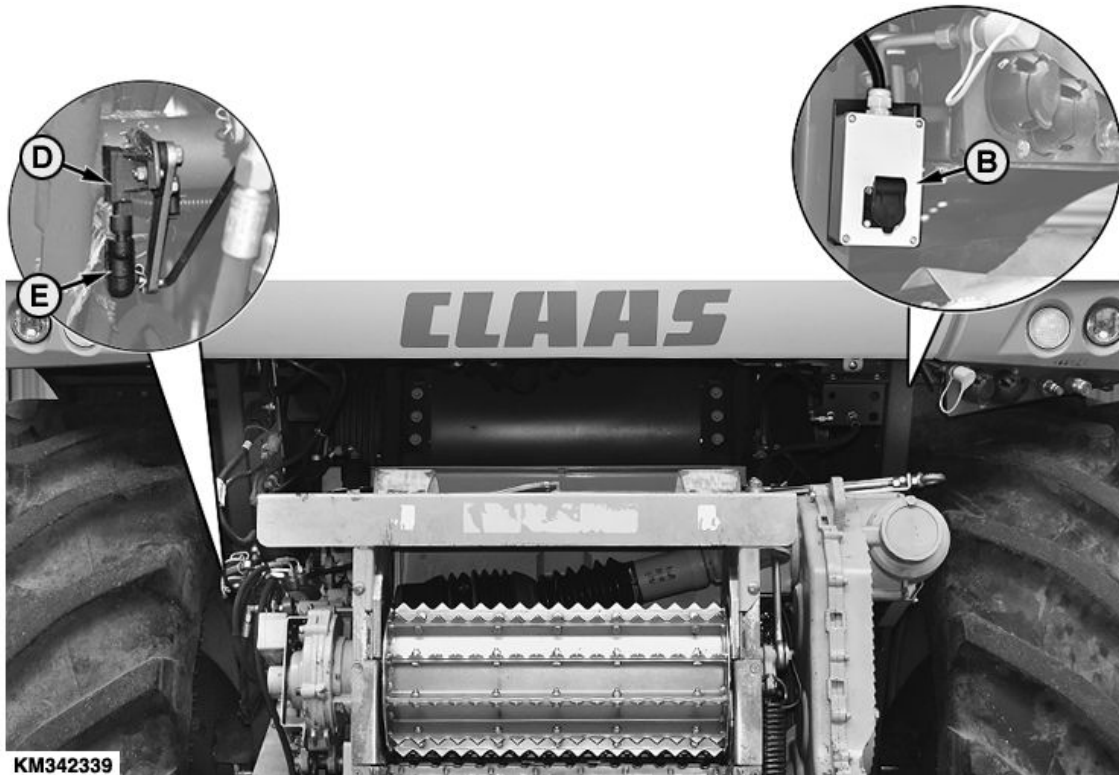
NOTE: Rotary harvesting units that have not been equipped for attachment of a support wheel at the factory have no adapter cable (A).

7. The adapter cable (A) must be removed from the Claas control unit (C) when the programming is complete. To do so, proceed as follows:

- Remove adapter cable (A).
- Connect the plug (B) of the main wiring harness directly to the Claas control unit (C).

KM00321,0000AFA -19-05OCT20-4/4

Install additional wiring harness (only forage harvesters of types 498, 499 and 502)



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 additional chassis
- All 10-row and 12-row rotary harvesting units

NOTE: The additional wiring harness is required so that the rotary harvesting unit can be folded in the raised condition.

The supplied wiring harness must be installed on the Claas forage harvester before attaching the rotary harvesting unit for the first time.

To do so, proceed as follows:

1. Pull out the connector (E) from the angle sensor (D) of the forage harvester.
2. Connect the plug connections (A) of the supplied wiring harness between the angle sensor (D) and connector (E) on the forage harvester.



A—Connectors
B—Socket outlet
C—Connecting cable

D—Angle Sensor
E—Connector

Continued on next page

KM00321,0000AFB -19-05OCT20-1/3

KM342339 —UN—03JUL18

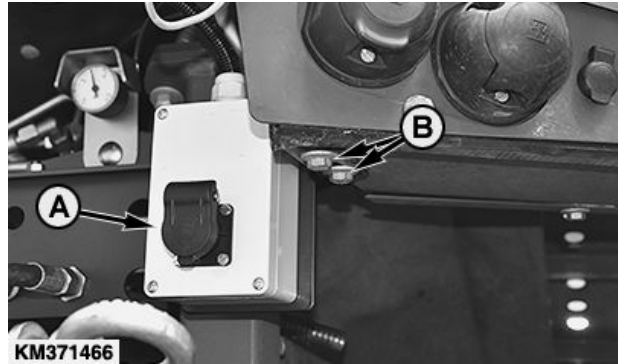
KM342337 —UN—02JUL18

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

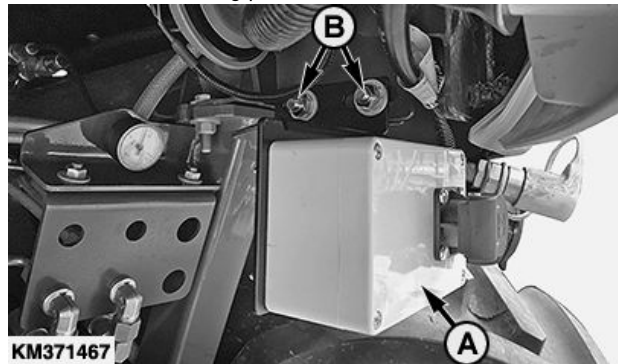
NOTE: The mounting position of the socket outlet varies and depends on the manufacture year of the forage harvester.

A—Socket outlet

B—Bolts



Mounting position of the socket outlet



Mounting position of the socket outlet

KM00321,0000AFB -19-05OCT20-2/3

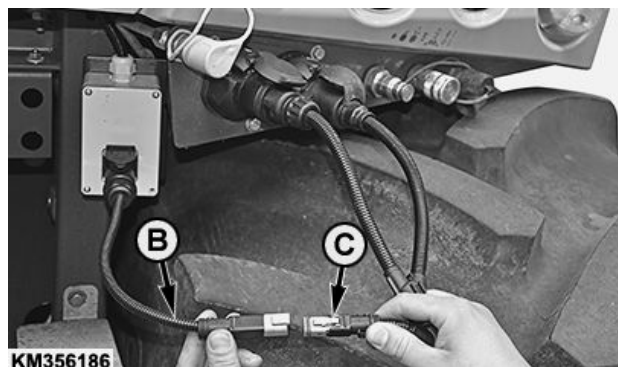
4. Fix the remaining cables with cable binders (A) behind the front cover.
5. Plug the connection cable (B) into the socket outlet and connect it to the main wiring harness (C).

NOTE: The socket outlet may be mounted on the forage harvester after the corn harvest. The socket outlet does not function as long as no plug is inserted.

A—Cable binder

B—Connecting cable

C—Main harness



KM00321,0000AFB -19-05OCT20-3/3

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.**

KM00321,0000204 -19-18AUG09-1/1

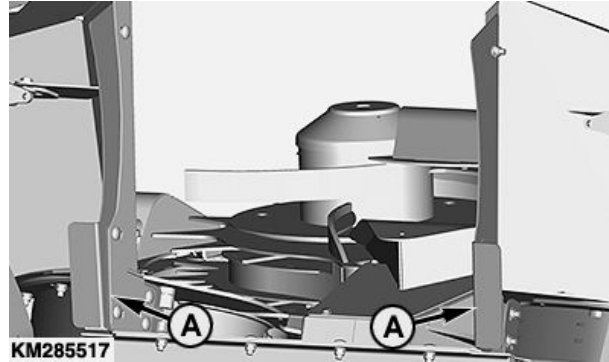
Adjusting Channel Width

Before attaching the rotary harvesting unit to the forage harvester, make sure that the feed plates (A) match with the channel width of the forage harvester.

Preset channel width (X) for attaching the rotary harvesting unit to a CLAAS forage harvester is 650 mm (2 ft. 1.59 in.).

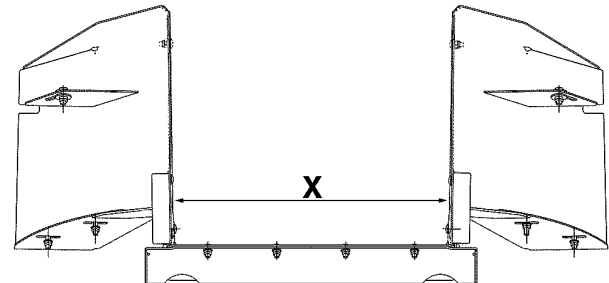
A—Feed Plates

X—Preset Channel Width



KM285517

KM285517 —UN—21NOV16



KM285518

KM285518 —UN—21NOV16

KM00321,0000544 -19-17JUN16-1/1

Install Feed Plates

Rotary harvesting units with rigid attaching frame:

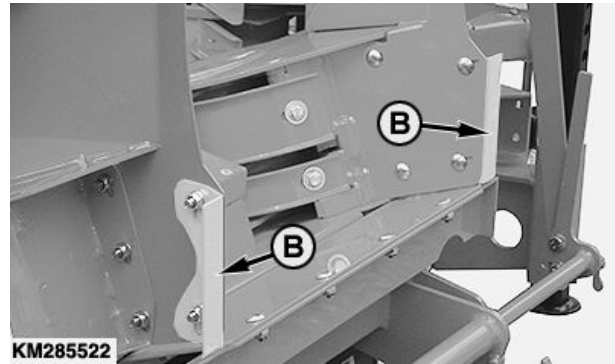
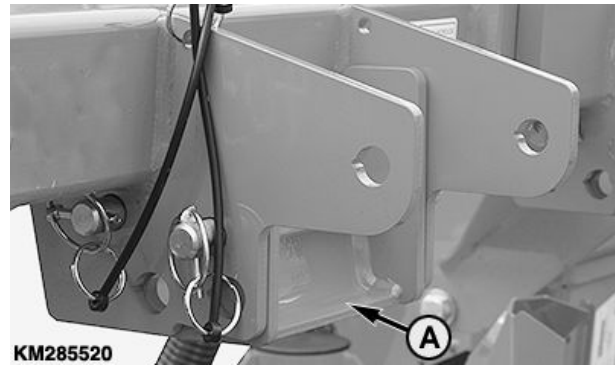
Depending on the condition of the crop, the rotary harvesting unit can be engaged in two different positions.

To guide the rotary harvesting unit flat on the ground, install console (A) on both sides in the front position as shown (factory setting).

IMPORTANT: When consoles (A) are installed in the front position, the short feed plates (B) must be installed.

A—Console

B—Feed Plates



KM285520—UN—21NOV16

KM285522—UN—21NOV16

Continued on next page

KM00321,0000545 -19-21JUN16-1/2

In certain harvesting conditions, console (A) can be installed in the rear position to obtain a larger angle to the ground (see illustration).

IMPORTANT: When consoles (A) are installed in the rear position, the long feed plates (C) must be installed.

Rotary harvesting unit with oscillating frame:

On rotary harvesting units with oscillating frame, consoles (A) cannot be adjusted.

IMPORTANT: On rotary harvesting units with oscillating frame, the long feed plates (C) must be installed at all times.

IMPORTANT: When attaching the rotary harvesting unit, make sure that feed plates (C) do not touch the feed rolls of the forage harvester.

A—Console

B—Feed Plates



KM285521

KM285521 —UN—21NOV16



KM285519

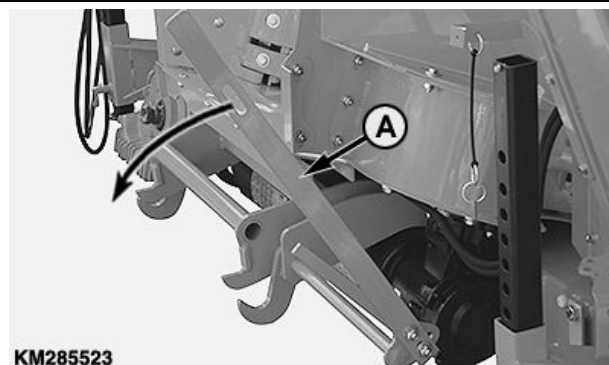
KM285519 —UN—21NOV16

KM00321,0000545 -19-21JUN16-2/2

Attach to CLAAS Forage Harvesters (Rotary Harvesting Units with Rigid Attaching Frame)

1. Unlatch lever (A).

A—Lever



KM285523

KM285523 —UN—21NOV16

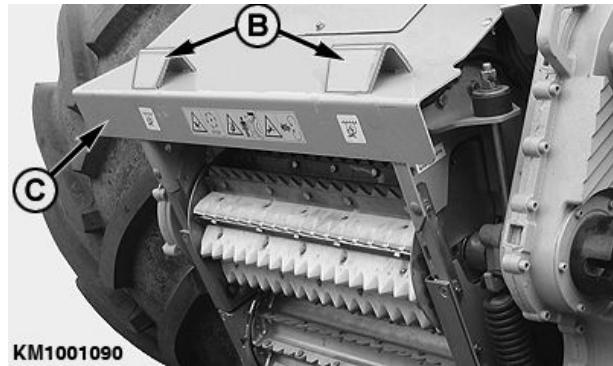
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KM00321,0000546 -19-20JUN16-1/5

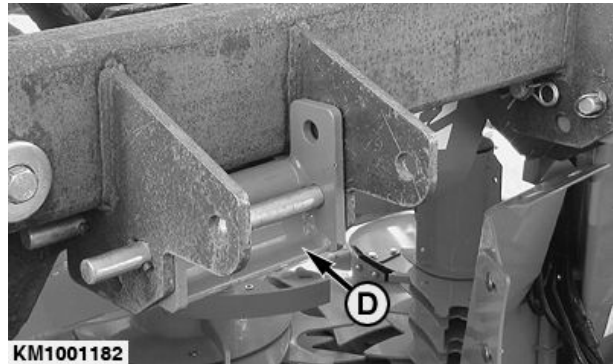
2. Drive the forage harvester close to the rotary harvesting unit's frame until attaching straps (B) protrude into consoles (D) of the attaching frame.
Lift feed roll housing (C) up until attaching straps (B) of the rotary harvesting unit lie in the consoles (D).

B—Attaching Straps
C—Feed Roll Housing

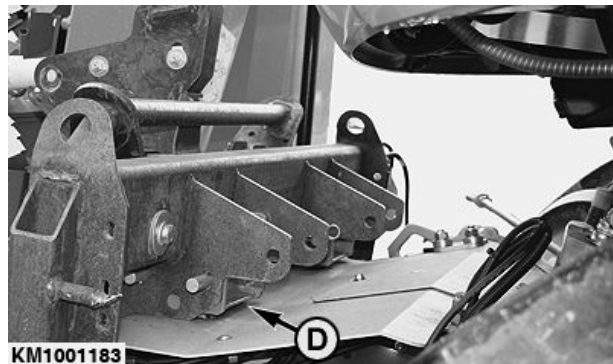
D—Console



KM1001090 —UN—04FEB10



KM1001182 —UN—07APR10

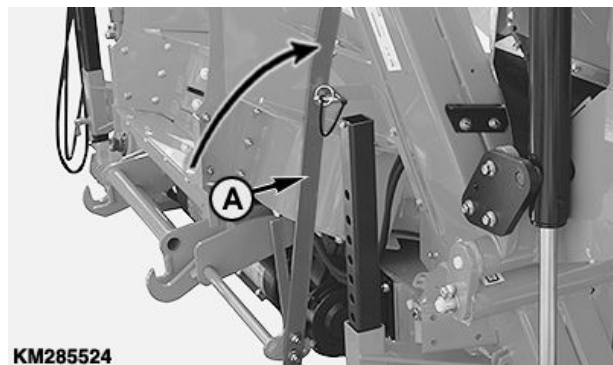


KM1001183 —UN—07APR10

KM00321,0000546 -19-20JUN16-2/5

3. Lock rotary harvesting unit by engaging lever (A).
Secure lever (A) with quick-lock pin.

A—Lever



KM285524 —UN—21NOV16

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KM00321,0000546 -19-20JUN16-3/5

- Secure upper bearing point by installing pin (G).

G—Pin



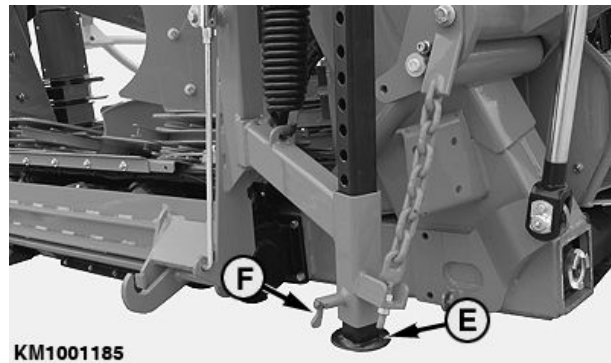
KM1002328 —UN—27JUN12

KM00321,0000546 -19-20JUN16-4/5

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

E—Jackstand

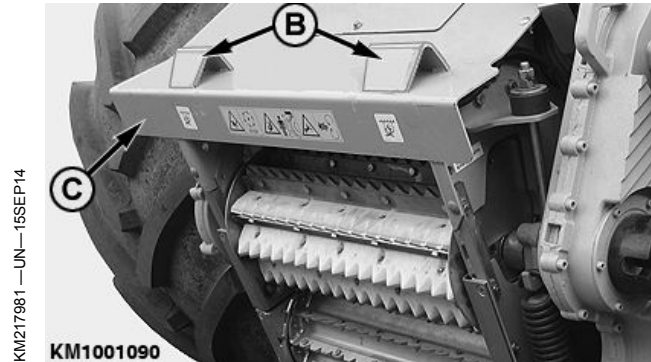
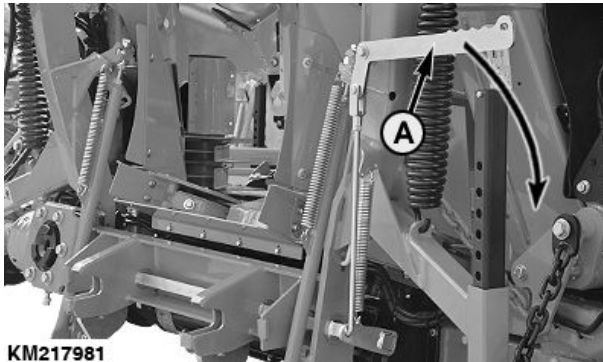
F—Pin



KM1001185 —UN—07APR10

KM00321,0000546 -19-20JUN16-5/5

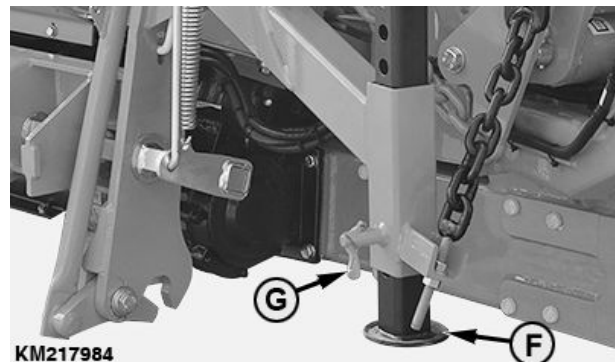
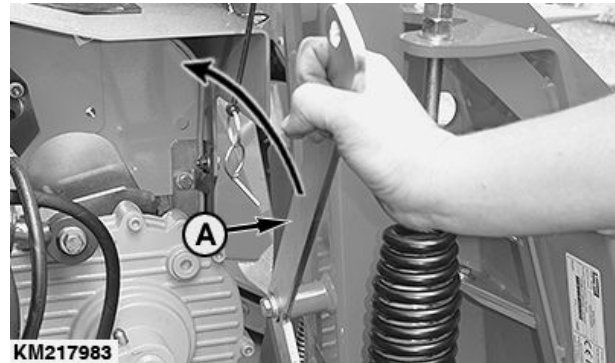
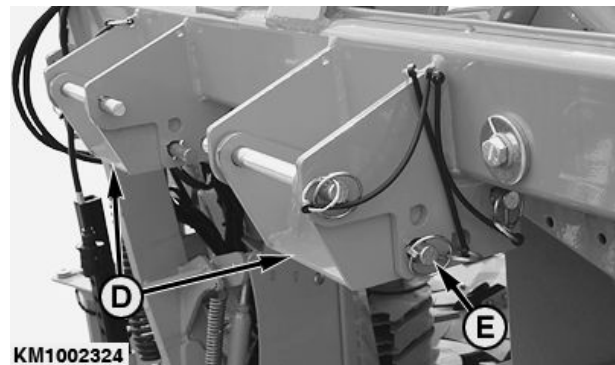
Attaching to CLAAS Forage Harvesters (Rotary Harvesting Units with Oscillating Frame)



1. Unlatch lever (A).
2. Drive the forage harvester close to the rotary harvesting unit's frame until attaching straps (B) protrude into consoles (D) of the attaching frame.
3. Remove pins (E) on both sides.
4. Lift feed roll housing (C) up until attaching straps (B) of the rotary harvesting unit lie in the consoles (D).
5. **Lock the rotary harvesting unit:**
Secure upper bearing point by installing pin (E).
Lock rotary harvesting unit by engaging lever (A).
Secure lever (A) with quick-lock pin.
6. 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—Lever
B—Attaching Straps
C—Feed Roll Housing
D—Console

E—Pin
F—Jackstand
G—Pin



KM00321,0000547 -19-20JUN16-1/1

Rotary Harvesting Units with Multi-Speed Transmission and Quick Coupler

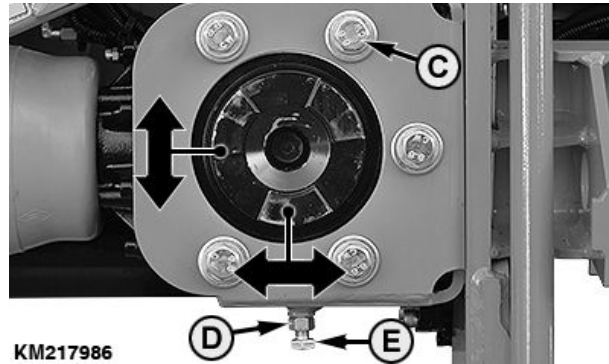
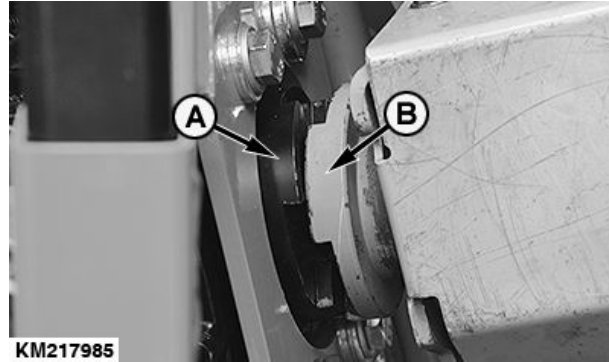
Adjust the quick coupler (only for initial use)

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

KM00321,0000548 -19-21JUN16-1/3

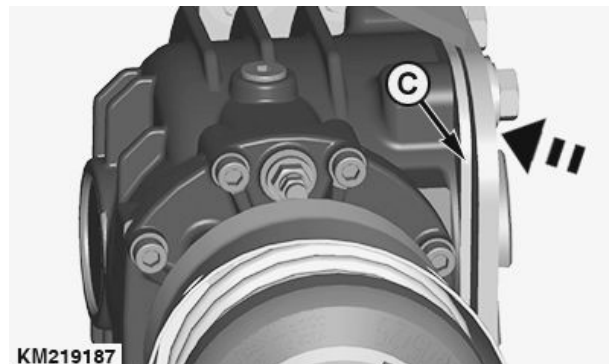
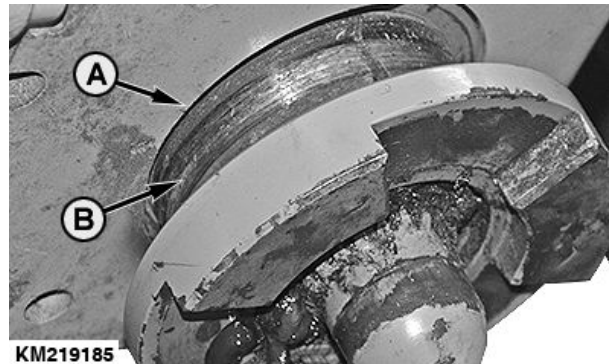
Adjust quick coupler in axial direction

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

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KM00321,0000548 -19-21JUN16-2/3

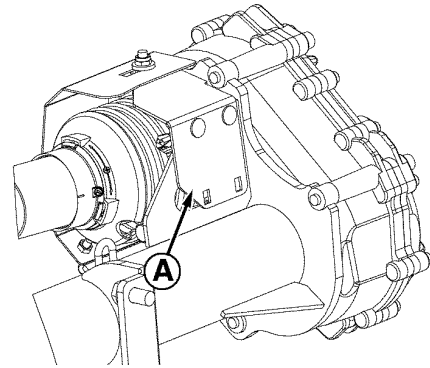
Only on rotary harvesting units 375^{plus} with an attaching frame capable of accepting a support wheel:

If a 375^{plus} rotary harvesting unit equipped with a mounting frame capable of accepting a support wheel is converted to attach the comfort support wheel, then shield (A) must be installed as shown in illustration 1.

NOTE: When the machine leaves the factory, shield (A) is installed as shown in illustration 2.

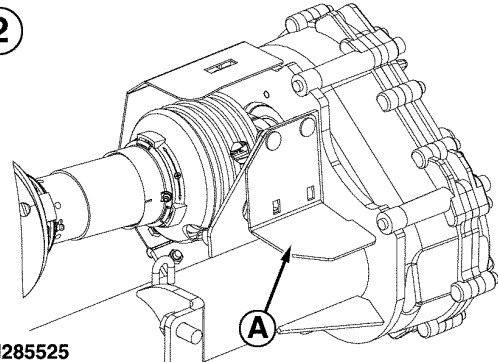
A—Shield

①



KM285526

②



KM285525

KM285526 —UN—21NOV16

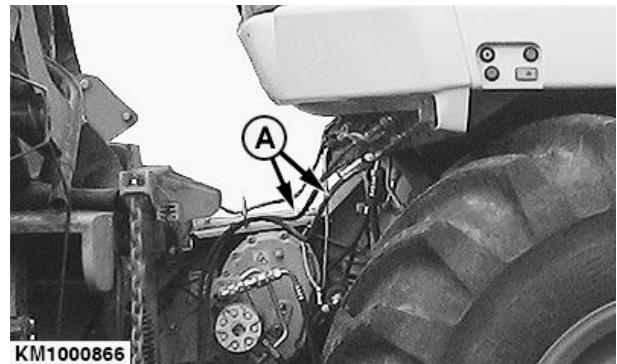
KM285525 —UN—21NOV16

KM00321,0000548 -19-21JUN16-3/3

Connect Hydraulic Hoses

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

A—Hydraulic hoses



KM1000866

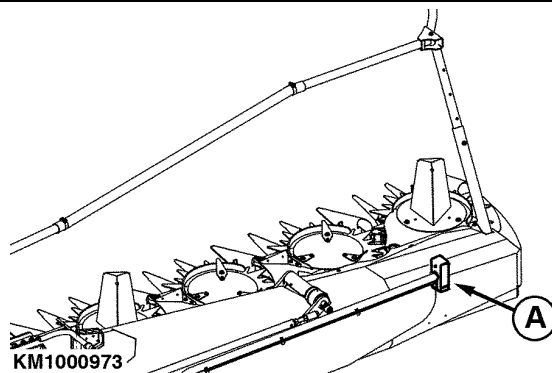
KM1000866 —UN—28MAY09

KM00321,0000179 -19-27MAY09-1/1

Connecting the Wiring Harness for Flashing Warning Lights (Optional on 375^{plus}, Standard on 390^{plus})

Connect wiring harness (A) for flashing warning lights to the socket provided on the forage harvester.

A—Flashing Warning Lights



KM1000973

KM1000973 —UN—20AUG09

KM00321,000033F -19-21OCT14-1/1

Connecting the Drive (Forage Harvester Type 492)

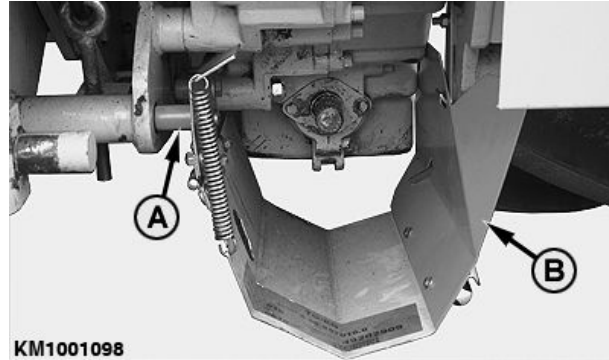
1. Install spacer bushings (A).
2. Extend the equipped shield by attaching plate (B).
3. Install protective cover (C).
4. Connect u.j. shaft (D).

IMPORTANT: Secure the u.j. shaft (D) with locking screws on both sides.

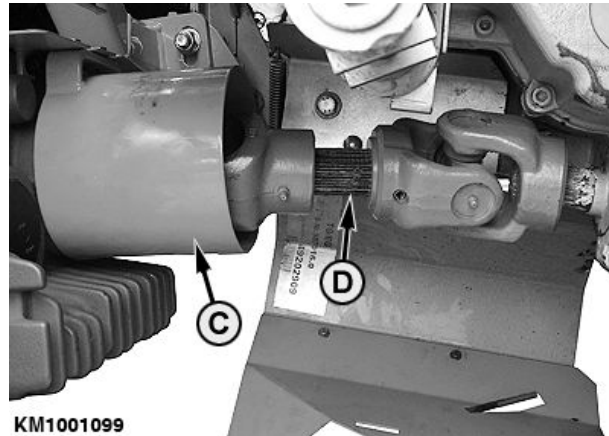
Make sure that u.j. shaft can no longer move.

A—Spacer Bushings
B—Plate

C—Protective Cover
D—U.J. Shaft

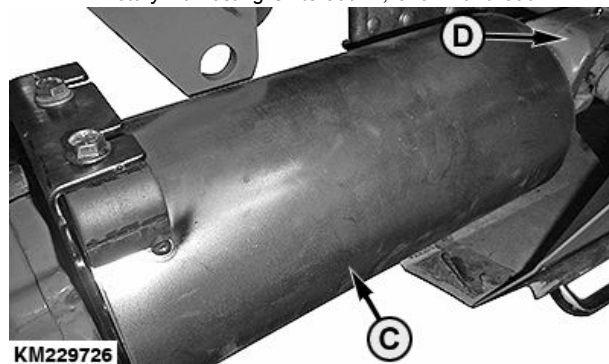


KM1001098 —UN—09FEB10



KM1001099 —UN—09FEB10

Rotary Harvesting Units 360^{plus}, 375^{plus} and 390^{plus}



KM229726 —UN—16DEC14

Rotary Harvesting Units 345^{plus}

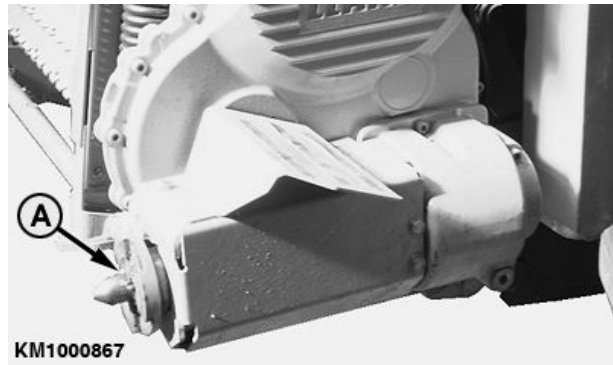
KM00321,0000362 -19-16DEC14-1/1

Connecting the Drive (Forage Harvester Types 493, 494, 497, 498, 499 and 502)

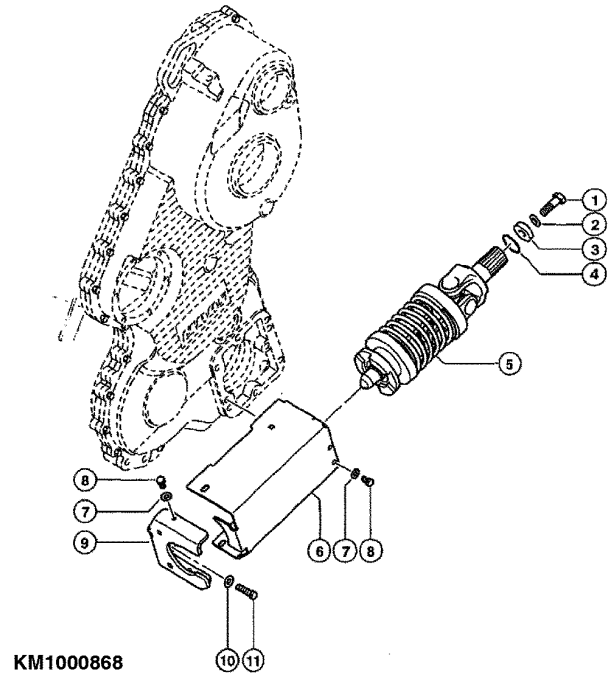
1. Completely remove claw clutch (A) from rotary harvesting unit drive.

To do this, disassemble items 1 to 11.

A—Claw Clutch



KM1000867 —UN—26MAY09



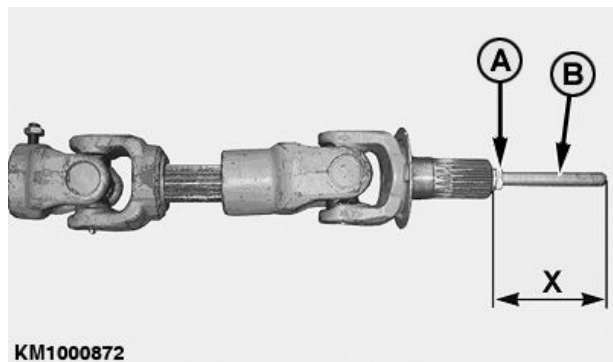
KM1000868 —UN—26MAY09

KM00321,0000AFD -19-05OCT20-1/9

2. Screw threaded rod (B) into the universal-jointed shaft, adjust to 167 mm (6.57 in.) (X) and counterlock with hex nut (A).

A—Hex. Nut
B—Threaded Rod

X—167 mm (6.57 in.)



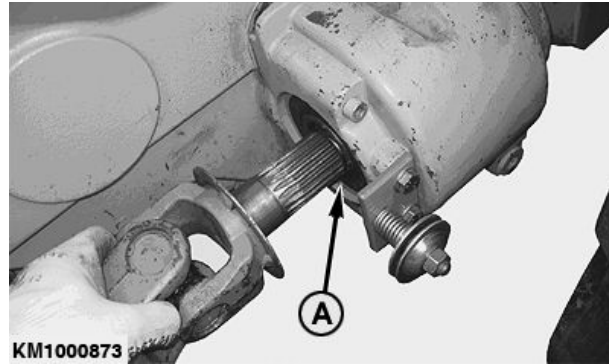
KM1000872 —UN—26MAY09

Continued on next page

KM00321,0000AFD -19-05OCT20-2/9

3. First insert universal-jointed shaft into splined bushing (A) of the rotary harvesting unit drive on the forage harvester.

A—Splined Bushing



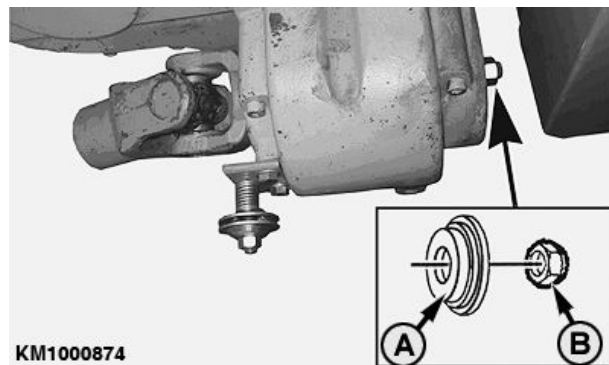
KM1000873 —UN—26MAY09

KM00321,0000AFD -19-05OCT20-3/9

4. Secure universal-jointed shaft with bushing (A) and retaining nut (B).

A—Bushings

B—Retaining Nut



KM1000874 —UN—26MAY09

KM00321,0000AFD -19-05OCT20-4/9

5. Put the other end of the universal-jointed shaft on the rotary harvesting unit gearbox (A).

A—Transmission



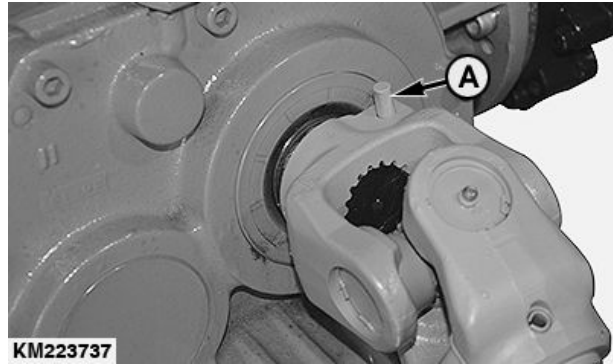
KM1000875 —UN—26MAY09

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KM00321,0000AFD -19-05OCT20-5/9

6. Ensure that sliding pin (A) is engaged and that the universal-jointed shaft is secured.

A—Sliding Pin



KM223737 —UN—22OCT14

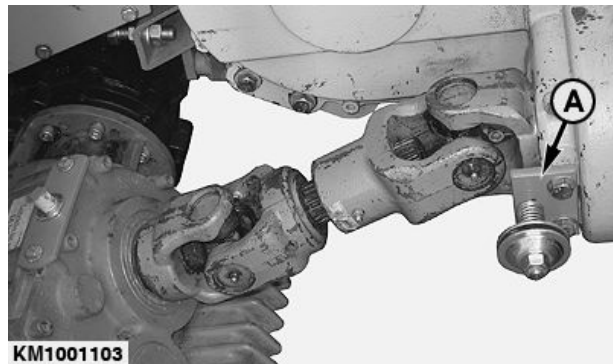
KM00321,0000AFD -19-05OCT20-6/9

Installing the Universal-jointed Shaft Shield (Claas 493, 494 and 497)

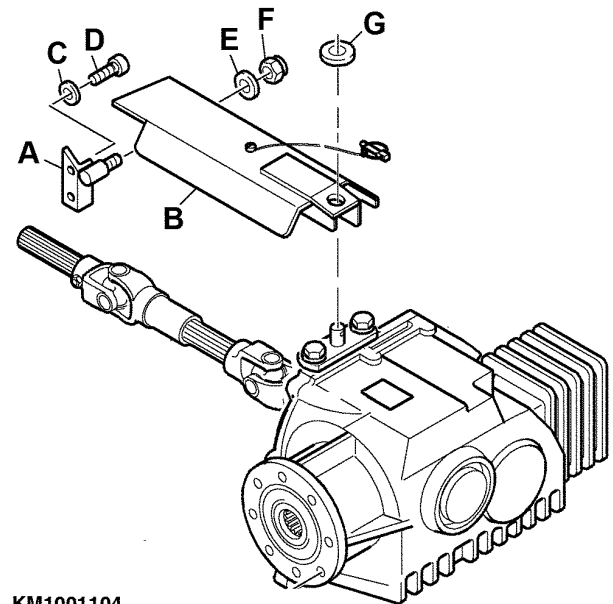
Install bracket (A).

Install the universal-jointed shaft shield (B).

- | | |
|----------------------------------|-----------------|
| A—Bracket | E—Washer |
| B—Universal-Jointed Shaft Shield | F—Retaining Nut |
| C—Split Washer | G—Washer |
| D—Cap Screw | |



KM1001103 —UN—09FEB10



KM1001104 —UN—09FEB10

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KM00321,0000AFD -19-05OCT20-7/9

Installing the Universal-jointed Shaft Shield (Claas 498, 499 and 502)

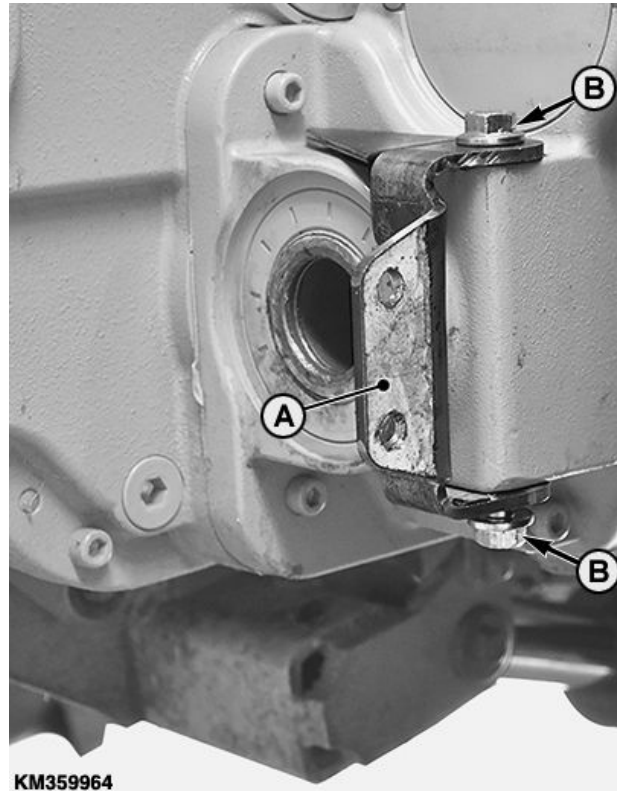
Fix adapter (A) with flange screws (B).

NOTE: Insert washers (C) as needed.

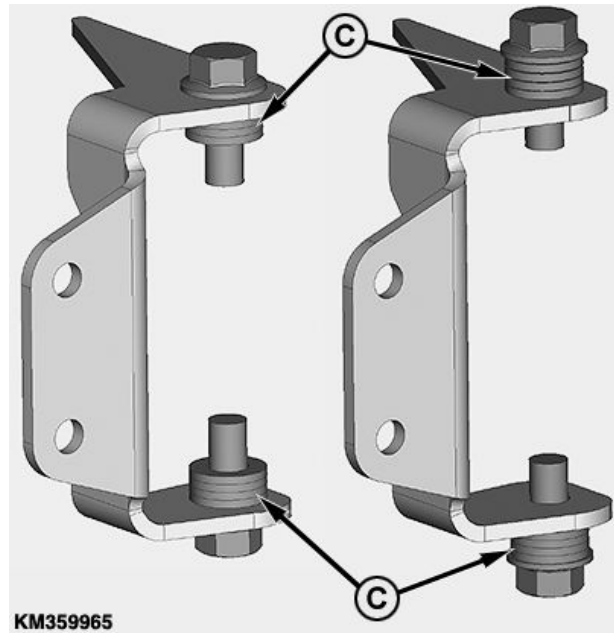
A—Adapter

B—Flange Screw

C—Washers



KM359964 —UN—17DEC18



KM359965 —UN—17DEC18

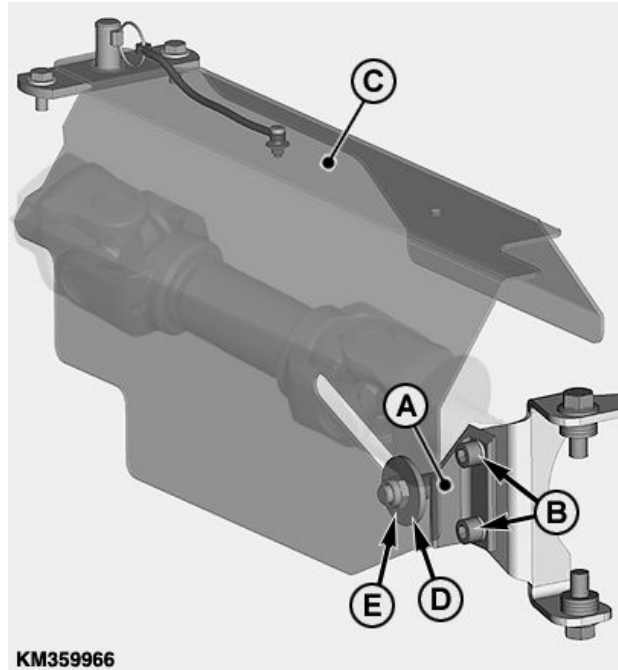
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KM00321,0000AFD -19-05OCT20-8/9

Mount holder (A) with hex socket screws.

Install the Universal-jointed Shaft Shield (C) and secure it with washer (D) and lock nut (E).

- | | |
|----------------------------------|-----------------|
| A—Bracket | D—Washer |
| B—Hex. Socket Screws | E—Retaining Nut |
| C—Universal-Jointed Shaft Shield | |



KM359966

KM359966 —UN—18DEC18

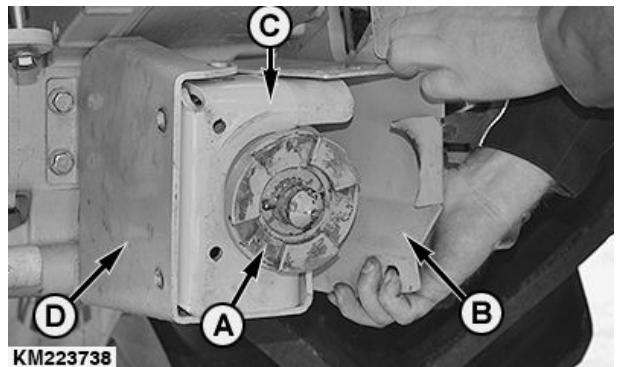
KM00321,0000AFD -19-05OCT20-9/9

Connecting the Drive (Forage Harvester Types 496, 500)

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

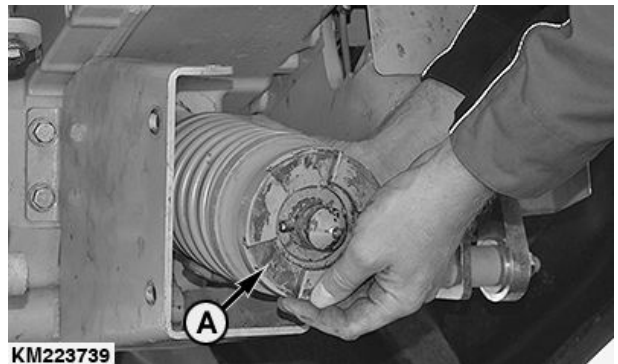
To do this, remove plates (B), (C) and (D), and take off claw clutch (A).

- | | |
|---------------|---------------|
| A—Claw Clutch | C—Metal Sheet |
| B—Metal Sheet | D—Metal Sheet |



KM223738

KM223738 —UN—22OCT14



KM223739

KM223739 —UN—22OCT14

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KM00321,0000AFE -19-05OCT20-1/8

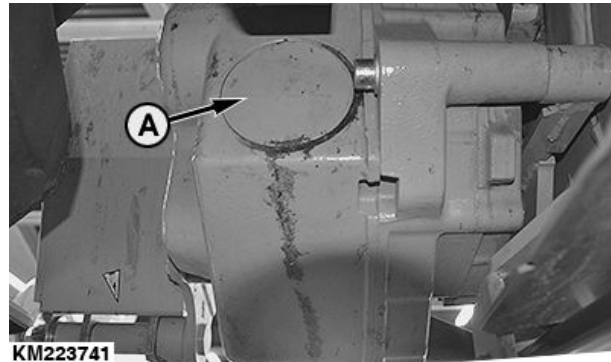
2. On the rear of the header drive, carefully force out the cap (A) using a 35 mm dia. shaft.

A—Cap



KM223740

KM223740 —UN—22OCT14



KM223741

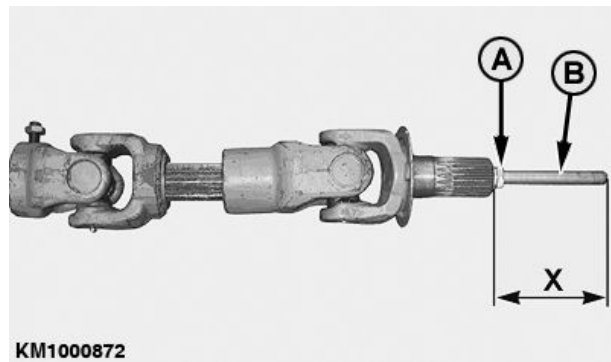
KM223741 —UN—22OCT14

KM00321,0000AFE -19-05OCT20-2/8

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

KM1000872 —UN—26MAY09

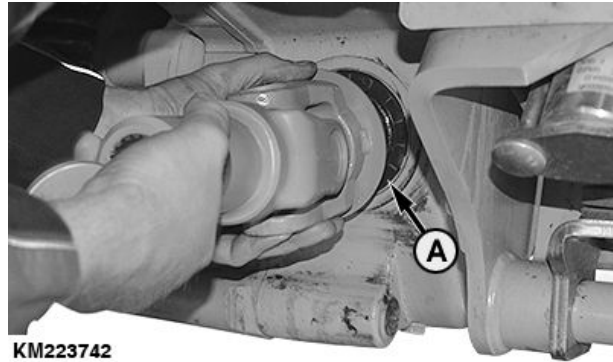
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KM00321,0000AFE -19-05OCT20-3/8

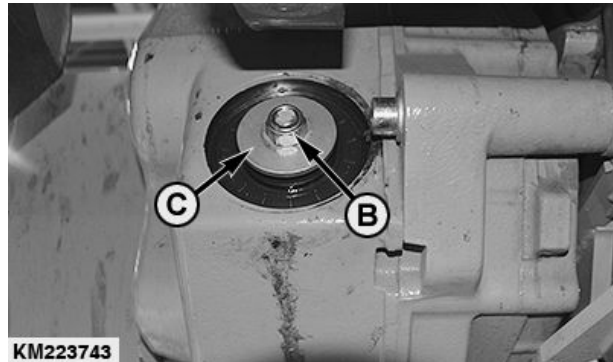
4. Insert the universal-jointed shaft into header drive (A) on the forage harvester.
5. Secure the universal-jointed shaft to the rear of the header drive using washer (C) and retaining nut (B).
6. Put the other end of the Universal-jointed Shaft Shield on the rotary harvesting unit transmission (D).

A—Header Drive
B—Retaining Nut

C—Washer
D—Transmission



KM223742 —UN—22OCT14



KM223743 —UN—22OCT14

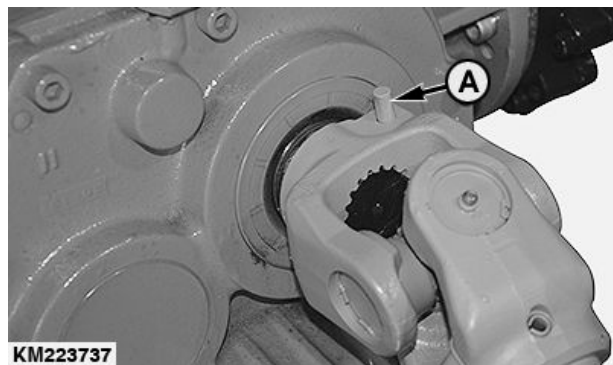


KM223744 —UN—22OCT14

KM00321,0000AFE -19-05OCT20-4/8

7. Ensure that sliding pin (A) is engaged and that the universal-jointed shaft is secured.

A—Sliding Pin



KM223737 —UN—22OCT14

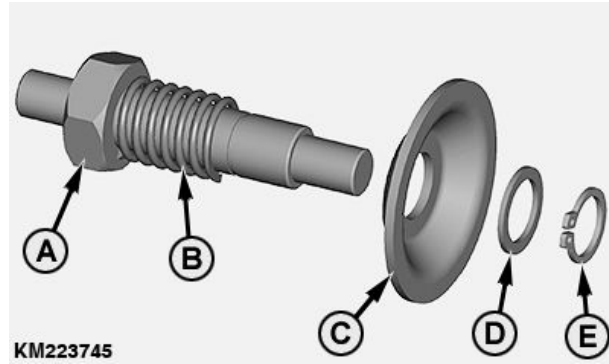
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KM00321,0000AFE -19-05OCT20-5/8

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

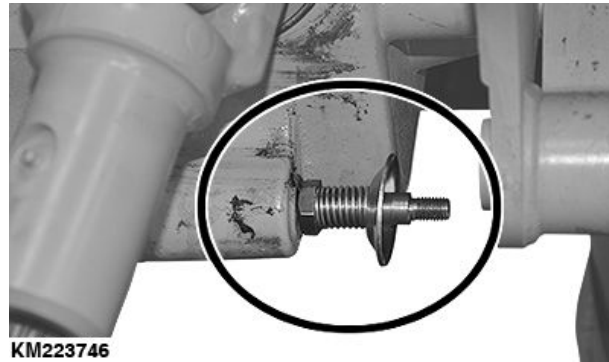
A—Shaft
B—Spring
C—Curved Spring Washer

D—Washer
E—Retaining Ring



KM223745

KM223745 —UN—22OCT14



KM223746

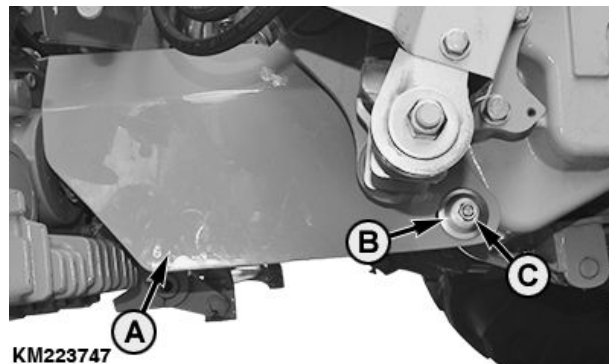
KM223746 —UN—22OCT14

KM00321,0000AFE -19-05OCT20-6/8

9. Install u.j. shaft shield (A) and secure with curved spring washer (B) and lock nut (C).

A—Universal-Jointed Shaft
Shield
B—Curved Spring Washer

C—Retaining Nut



KM223747

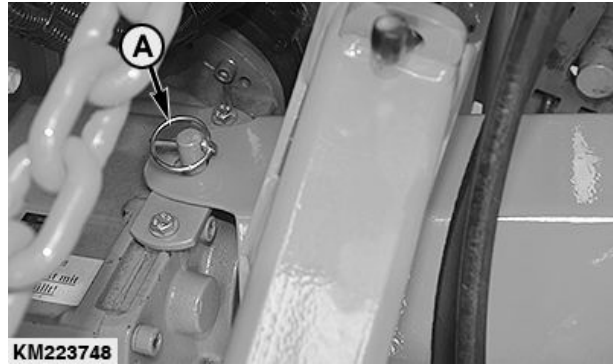
KM223747 —UN—22OCT14

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KM00321,0000AFE -19-05OCT20-7/8

10. Retain the Universal-jointed Shaft Shield with quick-lock pin (A).

A—Quick-Lock Pin



KM223748

KM223748 —JUN—22OCT14

KM00321,0000AFE -19-05OCT20-8/8

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).

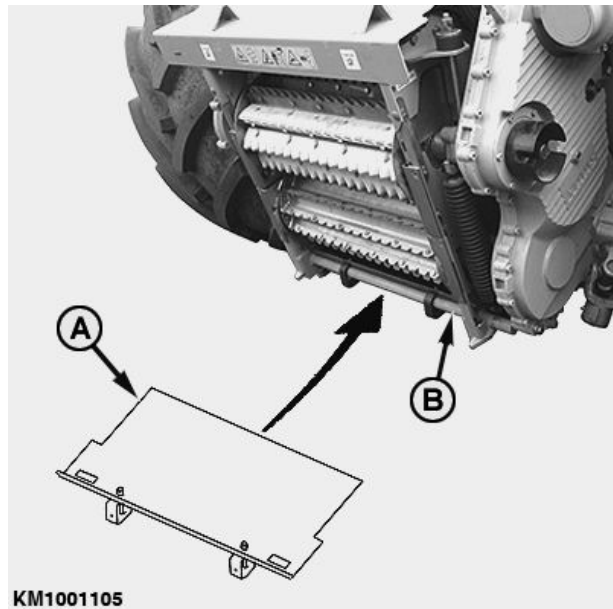
Installation:

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

KM1001105 —JUN—10FEB10

KM00321,000026B -19-25FEB10-1/1

Attaching to a KRONE Forage Harvester

Compatibility Chart

The chart below gives the compatibility between rotary harvesting unit and forage harvester.

Rotary Harvesting Unit/Harvester Compatibility

345 ^{plus}	BIG X 480 BIG X 530 BIG X 580 BIG X 630 BIG X 500
360 ^{plus}	BIG X 480 BIG X 530 BIG X 580 BIG X 630 BIG X V8 BIG X 500 BIG X 600 BIG X 650 BIG X 700
375 ^{plus}	BIG X 480 BIG X 530 BIG X 580 BIG X 630 BIG X V8 BIG X V12 BIG X 600 BIG X 650 BIG X 700 BIG X 770 BIG X 800 BIG X 850 BIG X 1000 BIG X 1100
390 ^{plus}	BIG X V8 BIG X V12 BIG X 600 BIG X 650 BIG X 700 BIG X 770 BIG X 800 BIG X 850 BIG X 1000 BIG X 1100

KM00321,0000AFF -19-05OCT20-1/1

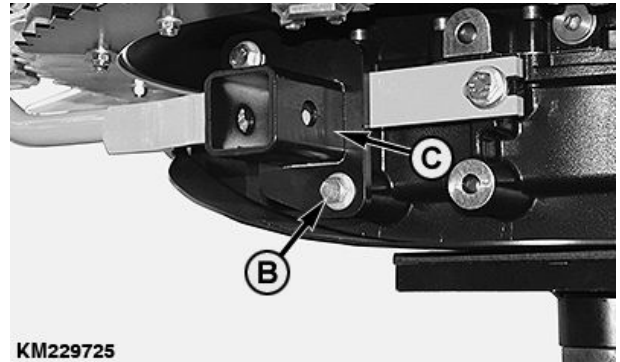
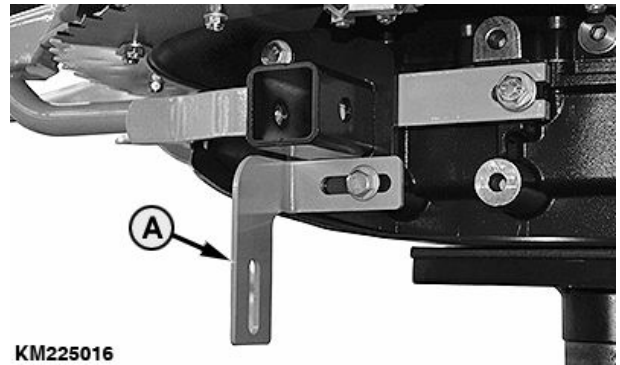
Remove Transport Straps

After taking off the transport pallet, the transport straps (A) on the left and right must be removed.

IMPORTANT: Then re-install and tighten screw (B).
This secures bracket (C) for front jackstands.

A—Transport Strap
B—Screw

C—Bracket



KM00321,0000361 -19-10DEC14-1/1

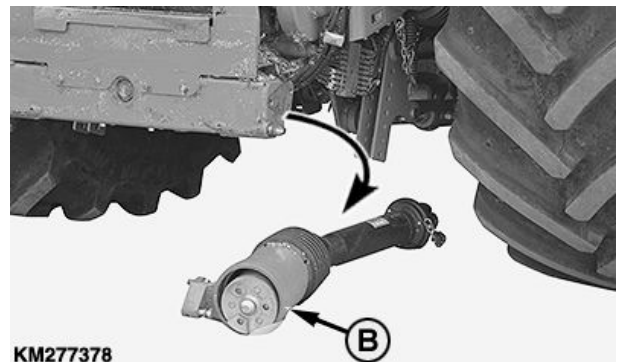
Attaching to KRONE Forage Harvesters (Models BIG X 480, 530, 580 and 630)

1. Take out screws (A) and remove quick coupler (B).

CAUTION: Take great care when removing the quick coupler. The quick coupler is very heavy. If necessary, get someone to help you when removing the quick coupler.

A—Screws

B—Quick Coupler



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KM00321,000053E -19-21JUN16-1/11

2. Use screws (B) and (C) and lock washers (D) to install console (A).

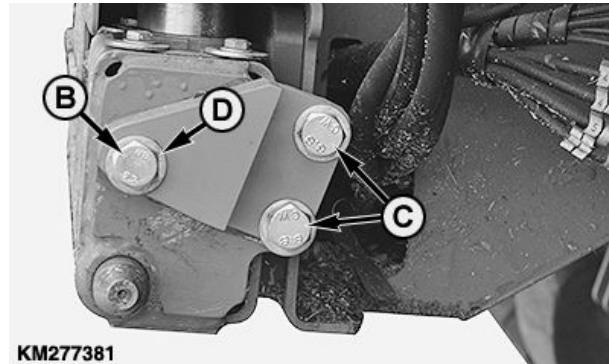
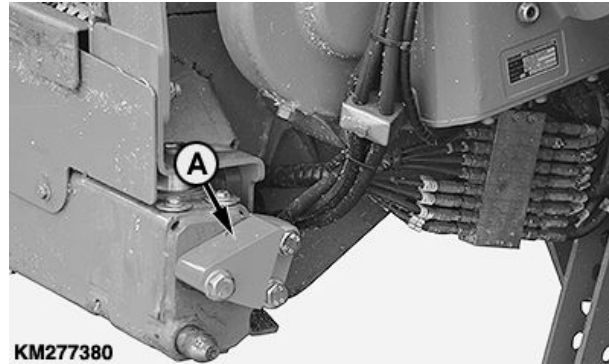
Tighten screws (B) and (C) to specification.

Specification

M16 Screws—Torque.....320 N·m
236 lb.-ft.

A—Console
B—M16x70 Screw

C—M16x35 Screws
D—Lock Washer



KM277380 —UN—21NOV16

KM277381 —UN—21NOV16

KM00321,000053E -19-21JUN16-2/11

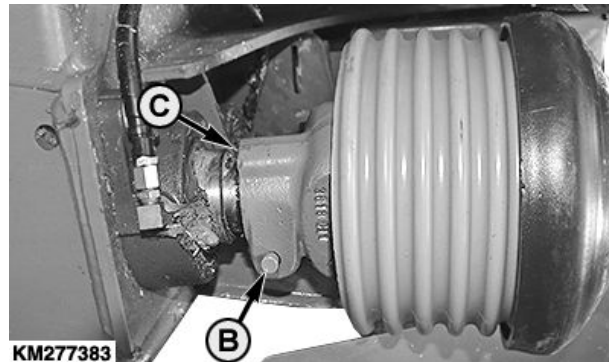
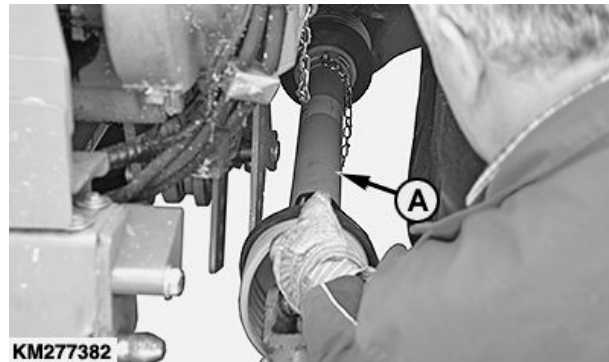
3. Connect driveshaft (A) to the forage harvester.

NOTE: One end of the driveshaft has been machined with shaped area (C). Connect the machined end of the driveshaft to the forage harvester.

IMPORTANT: Make sure that the sliding pin (B) engages and that the driveshaft is secure.

A—Driveshaft
B—Sliding Pin

C—Shaped Area



KM277382 —UN—21NOV16

KM277383 —UN—21NOV16

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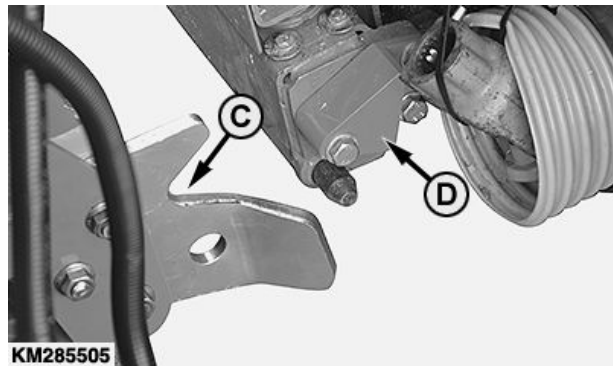
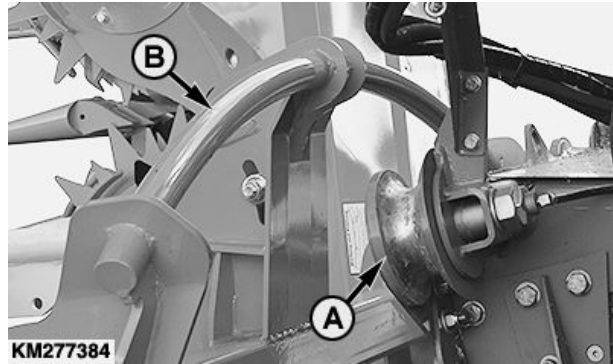
KM00321,000053E -19-21JUN16-3/11

4. Drive the forage harvester slowly to the rotary harvester unit until oscillating frame rollers (A) on the right and left sides of the forage harvester are located below pipe (B) on the rotary harvesting unit.
5. Make sure that the lower opening (C) in the rotary harvesting unit is in front of console (D).

A—Rollers on Oscillating
Frame

C—Opening
D—Console

B—Pipe

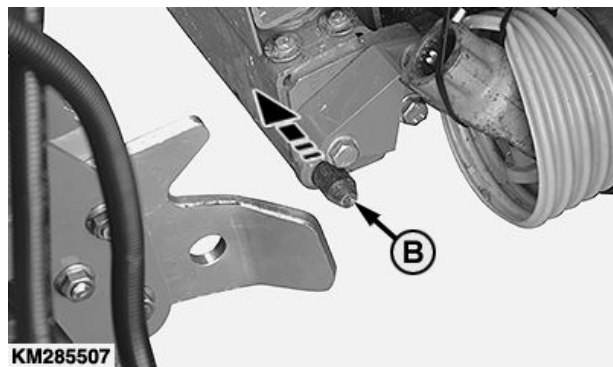


KM00321,000053E -19-21JUN16-4/11

6. Keep softkey (A) pressed down to retract locking pins (B).

A—Softkey

B—Locking Pin



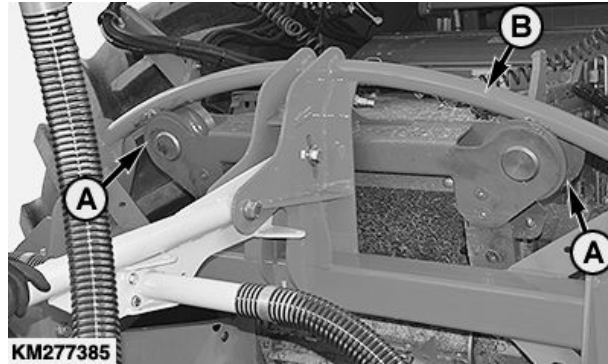
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KM00321,000053E -19-21JUN16-5/11

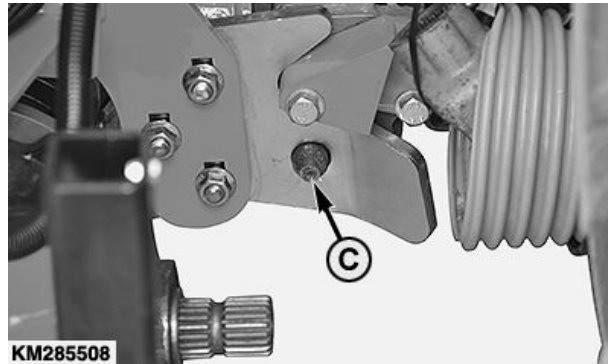
7. When rollers (A) on the oscillating frame are below pipe (B), lift the feed roll housing up and attach the rotary harvesting unit.
8. Extend the locking pins (C) and latch the rotary harvesting unit.

A—Rollers on Oscillating
Frame
B—Pipe

C—Locking Pin



KM277385 —UN—21NOV16



KM285508 —UN—21NOV16

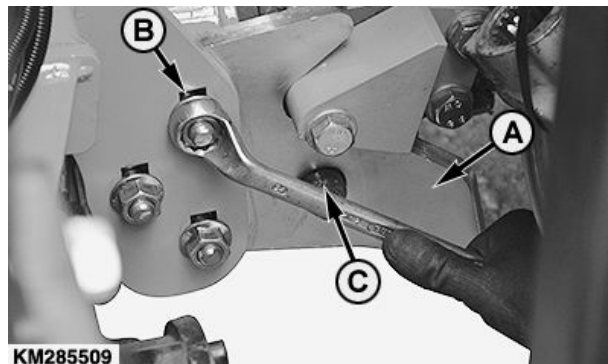
KM00321,000053E -19-21JUN16-6/11

9. Only when attaching for the first time:

Adjust lower plates (A) using slots (B) so that the locking pins (C) on the forage harvester can be latched.

A—Plate
B—Slots

C—Locking Pin



KM285509 —UN—21NOV16

Continued on next page

KM00321,000053E -19-21JUN16-7/11

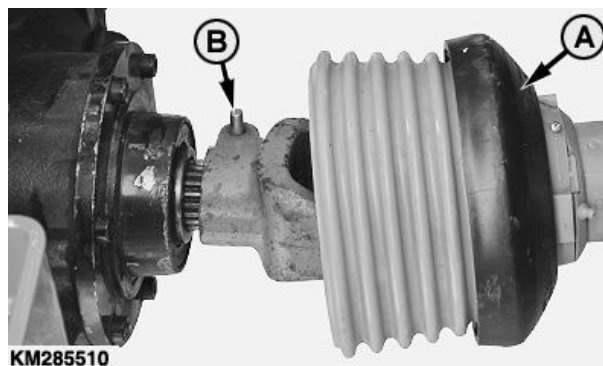
10. Connect driveshaft (A) to the transmission of rotary harvesting unit.

IMPORTANT: Make sure that the sliding pin (B) engages and that the driveshaft is secure.

NOTE: For clarity, the shield has been removed from the rotary harvesting unit. Never operate the rotary harvesting unit without the shield.

A—Driveshaft

B—Sliding Pin



KM285510

KM285510 —UN—21NOV16

KM00321.000053E -19-21JUN16-8/11

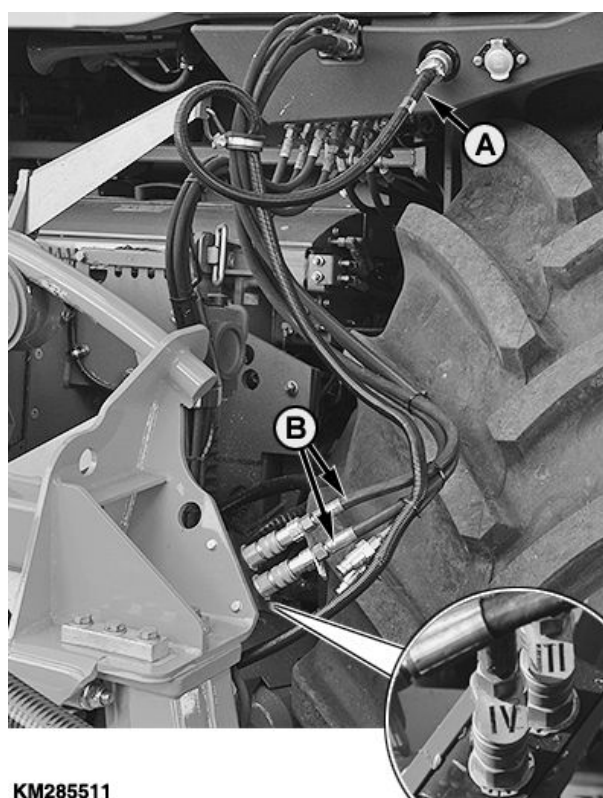
11. Connect main wiring harness (A) for height control and row guidance options.

NOTE: Hydraulic hoses (B) of the forage harvester are marked individually.

12. As shown, connect hydraulic hoses (III) and (IV) for the folding function of the rotary harvesting unit.

A—Main Wiring Harness

B—Hydraulic Hoses



KM285511

KM285511 —UN—21NOV16

Continued on next page

KM00321.000053E -19-21JUN16-9/11

NOTE: The forage harvester is equipped with a 24-volt power supply. For this reason, connector (A) and bulbs (B) of the road safety system must be replaced.

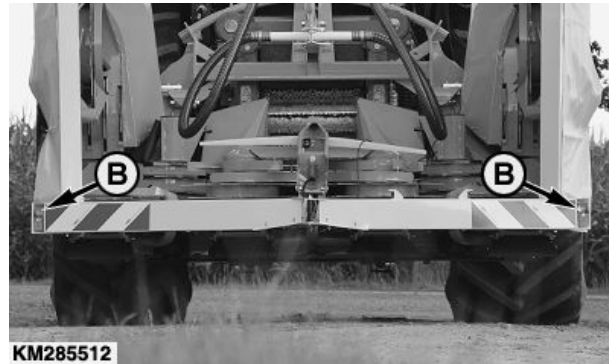
13. Replace connector (A) of the road safety system with the 24-volt connector provided.
14. Replace bulbs (B) with the 24-volt bulbs provided.

A—Connector

B—Bulbs



KM285513 —UN—21NOV16

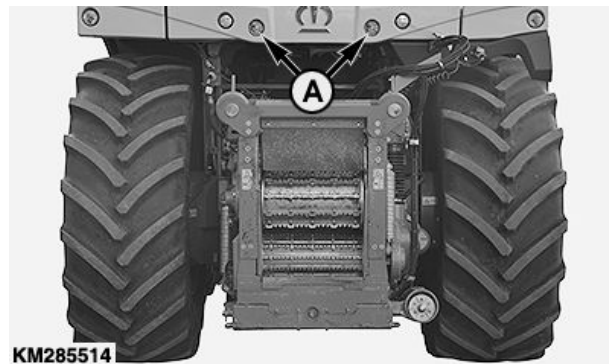


KM285512 —UN—21NOV16

KM00321,000053E -19-21JUN16-10/11

15. If the rotary harvesting unit conceals headlights (A) when driving on public roads, additional headlights must be attached to the railing. These additional headlights are available from your KRONE dealer.

A—Headlights



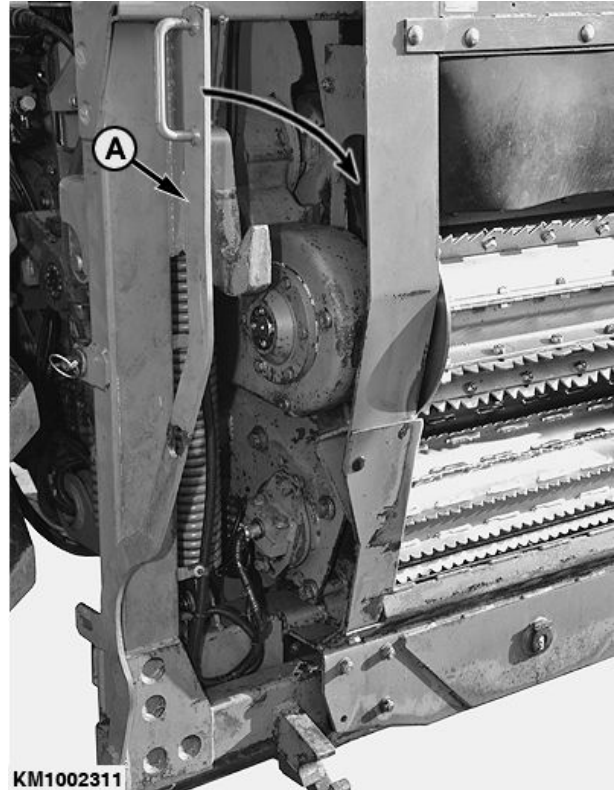
KM285514 —UN—21NOV16

KM00321,000053E -19-21JUN16-11/11

Attaching to KRONE Forage Harvesters (Models BIG X 500, 600, 650, 700, 770, 800, 850, 1000 and 1100)

1. Unlatch lever (A).

A—Lever



KM1002311

KM1002311 —UN—14JUN12

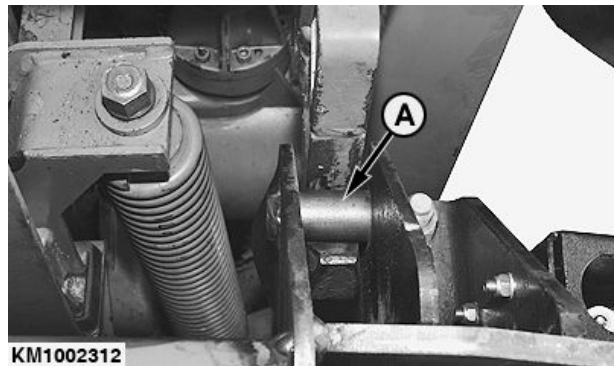
KM00321,000053F -19-14JUN16-1/7

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

Lift the feed roll housing up and attach the rotary harvesting unit.

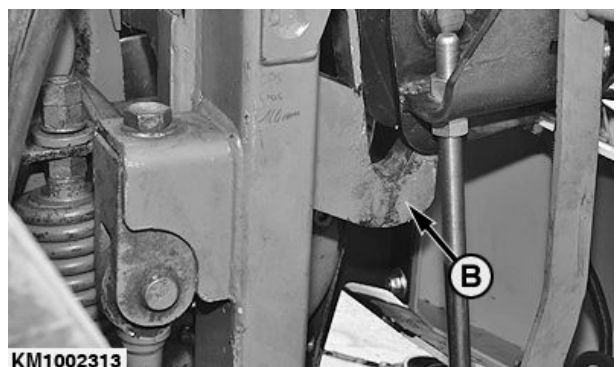
A—Pin

B—Receiver Jaws



KM1002312

KM1002312 —UN—21JUN12



KM1002313

KM1002313 —UN—21JUN12

Continued on next page

KM00321,000053F -19-14JUN16-2/7

3. Continue lifting the feed roll housing until lower locking pins (B) are in receiver jaws (C).

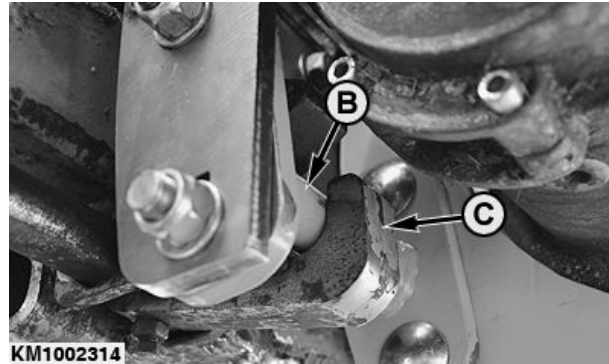
Only when attaching for the first time:

Adjust lower locking pins (B) using slots (A) so that the lever on the forage harvester can be latched.

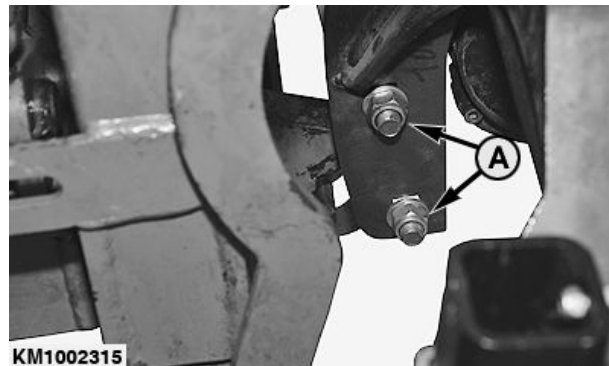
A—Slots

B—Locking Pin

C—Receiver Jaws



KM1002314 —UN—21JUN12



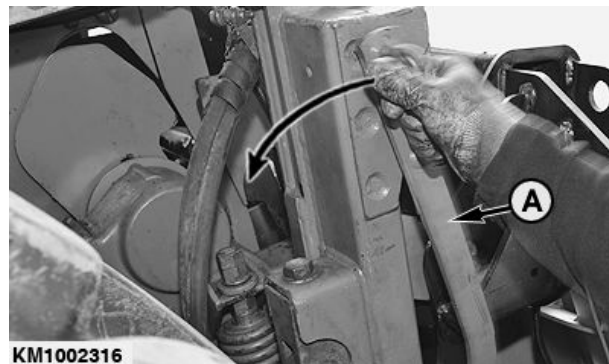
KM1002315 —UN—21JUN12

KM00321,000053F -19-14JUN16-3/7

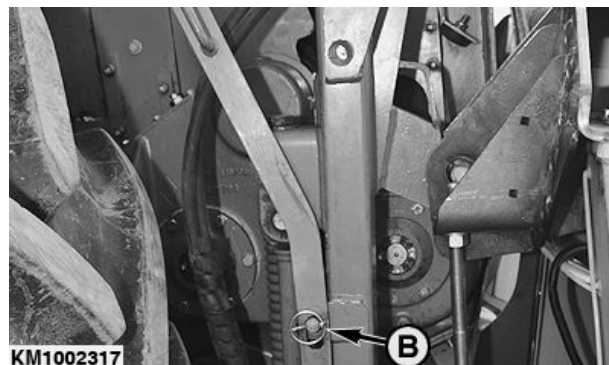
4. Lock rotary harvesting unit by engaging lever (A) and secure with quick-lock pin (B).

A—Lever

B—Quick-Lock Pin



KM1002316 —UN—18JUN12



KM1002317 —UN—18JUN12

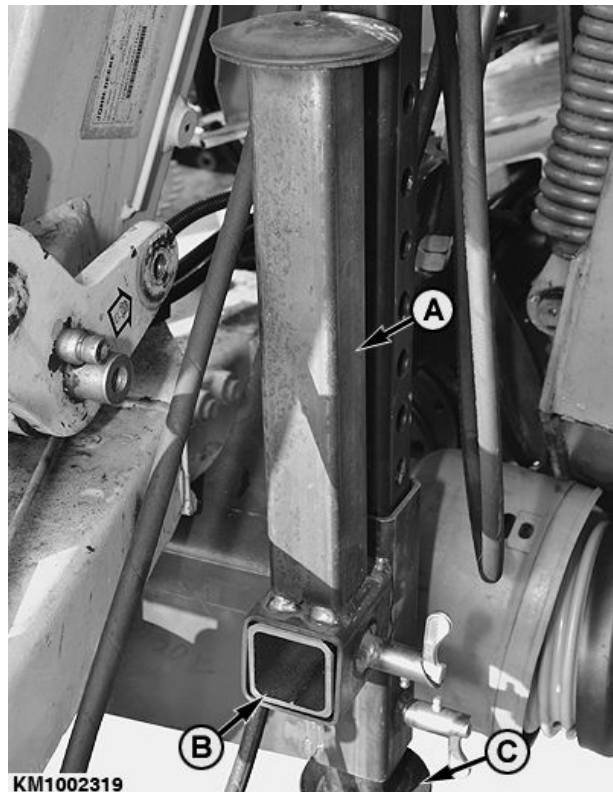
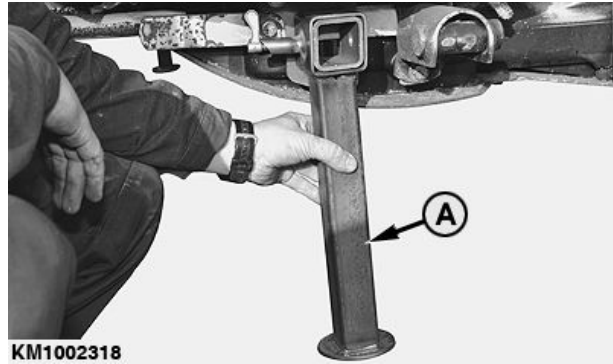
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KM00321,000053F -19-14JUN16-4/7

5. Remove front jackstands (A) and store them in the mounting provided (B).
6. Pull rear jackstands (C) up and lock them in the highest position.

A—Front Jackstands
B—Mounting

C—Rear Jackstands



KM1002318 —UN—18JUN12

KM1002319 —UN—18JUN12

KM00321,000053F -19-14JUN16-5/7

7. Connect the driveshaft (A) on the rotary harvesting unit to the driveshaft (B) on the forage harvester.

IMPORTANT: Make sure that the slide ring engages on both ends of the driveshaft.

A—Driveshaft - Rotary
Harvesting Unit

B—Driveshaft - Forage
Harvester



KM1002320 —UN—19JUN12

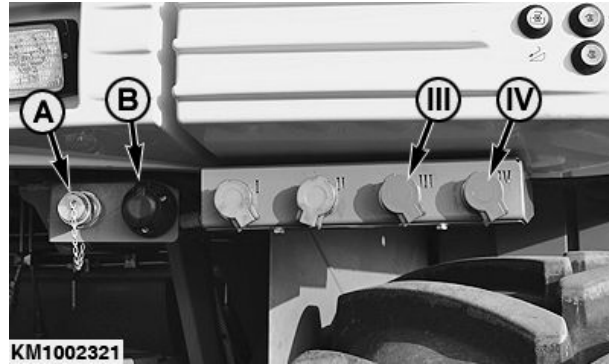
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KM00321,000053F -19-14JUN16-6/7

8. Connect wiring harness for height control and row guidance (steering assistance) options to socket (A).
9. Connect wiring harness for rotary harvesting unit lighting to socket (B) on the forage harvester.
10. Connect the hydraulic hoses for the folding function of the rotary harvesting unit to hydraulic outlets (III) and (IV) on the forage harvester.

A—Socket
B—Socket

III— Hydraulic Connection
IV— Hydraulic Connection



KM1002321

KM1002321 —UN—20JUN12

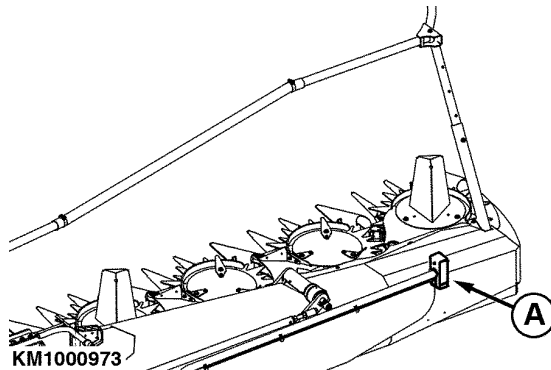
KM00321,000053F -19-14JUN16-7/7

Connect Clearance and Indicator Light Wiring Harness (375^{plus} and 390^{plus})

NOTE: Models 375^{plus} and 390^{plus} are equipped with clearance and indicator lights in the lateral protective brackets.

Connect the clearance and indicator light wiring harness to the socket provided on the forage harvester.

A—Clearance and Indicator Lights



KM1000973

KM1000973 —UN—20AUG09

KM00321,000018C -19-21JUN12-1/1

Switch Off Reverse when Idling

To switch off Reverse when Idling, the following parameters must be changed in the forage harvester software:

Parameter BIG X (Header Range)			
No.	Level	Recommended setting	Description
25241	Service	65000 IMPORTANT: Ex factory, the maximum adjustable value is 20000. Your Krone dealer can increase this value in the developer range to 65000.	This is the delay that comes after the "Raise Lifting Gear" button is pressed before feed and harvesting unit start up in reduced idle.
25242	Service	0	Duration of reversing of rotary harvesting unit after delay has ended.
25478	Operator	0	Dynamic header speed control can be activated and deactivated. 0 = Dynamic header speed deactivated

KM00321,0000363 -19-19DEC14-1/1

Attaching to a FENDT Forage Harvester

Align the Oscillating Frame

Align oscillating frame (A) with linear module (B).

A—Oscillating Frame

B—Linear Module



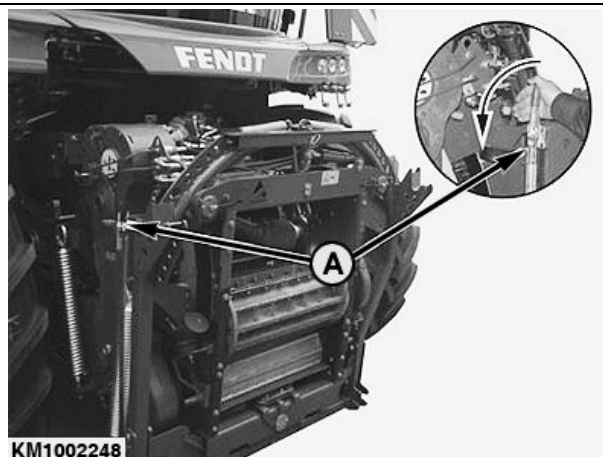
KM1002247 —UN—23MAR12

KM00321,0000126 -19-23MAR12-1/1

Attach the Rotary Harvesting Unit to FENDT Forage Harvesters

1. Use tensioning lever (A) to open the lock.

A—Tensioning Lever



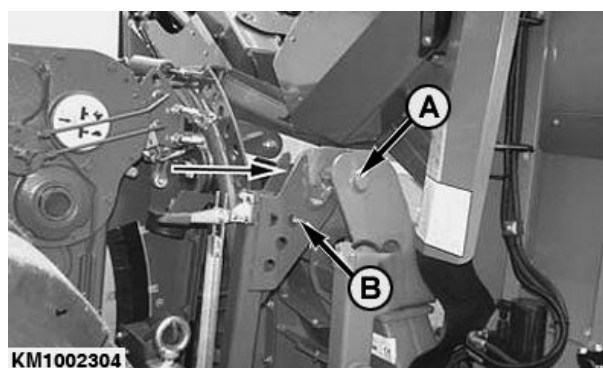
KM1002248 —UN—23MAR12

KM00321,0000184 -19-12JUN12-1/5

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

A—Pin

B—Receiver Jaws



KM1002304 —UN—11JUN12

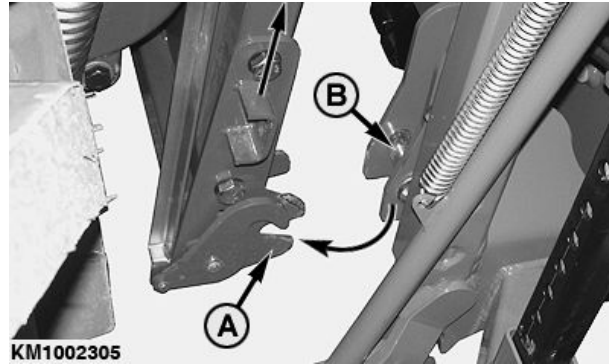
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KM00321,0000184 -19-12JUN12-2/5

3. Raise the lifting gear until pins (B) engage in the lower latches (A) at left and right.
4. Stop the engine.
5. Apply the park brake.

A—Latches

B—Pin

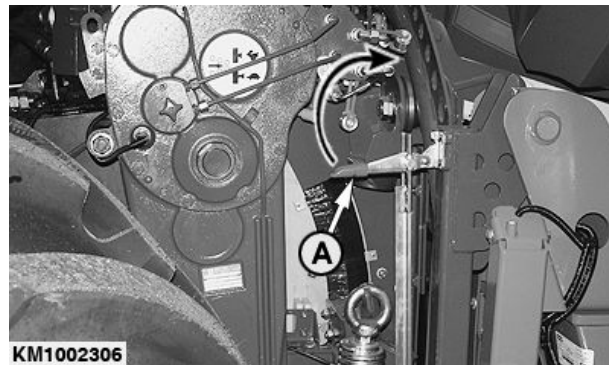


KM1002305 —UN—12JUN12

KM00321,0000184 -19-12JUN12-3/5

6. Use tensioning lever (A) to close the lock.

A—Tensioning Lever

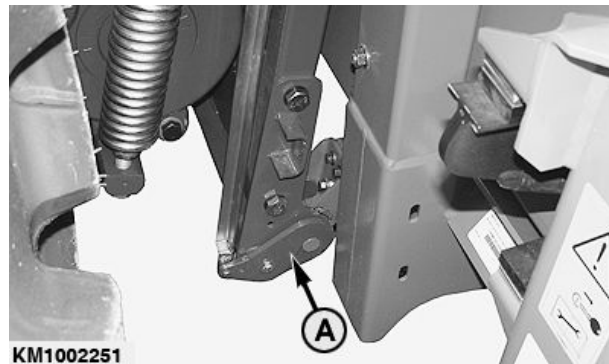


KM1002306 —UN—12JUN12

KM00321,0000184 -19-12JUN12-4/5

7. Check that locking hooks (A) are seated correctly.

A—Locking Hook



KM1002251 —UN—23MAR12

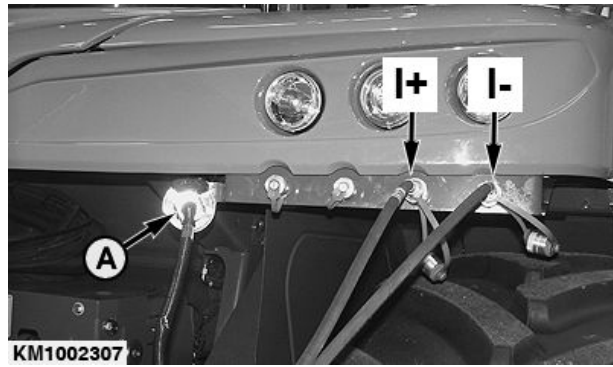
KM00321,0000184 -19-12JUN12-5/5

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 on the forage harvester.

A—Wiring Harness



KM1002307

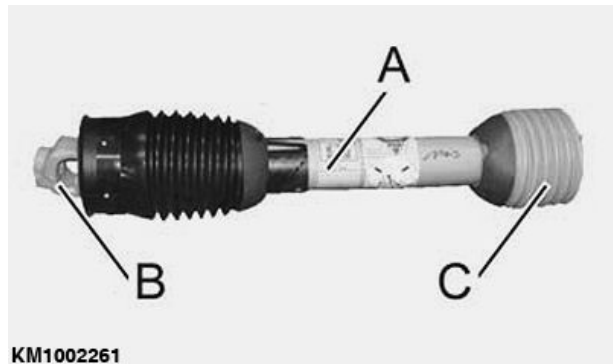
KM1002307 —UN—13JUN12

KM00321,0000185 -19-13JUN12-1/1

U.j. Shaft

A—U.j. Shaft
B—Header End

C—Forage Harvester Feeder End



KM1002261

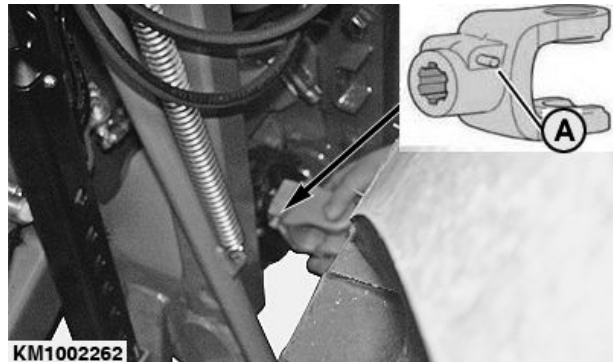
KM1002261 —UN—29MAR12

KM00321,000012C -19-29MAR12-1/1

Connect the U.j. Shaft

1. Press sliding pin (A) and slide the joint onto the splined shaft on the pickup until sliding pin (A) engages in the ring-shaped groove.

A—Sliding Pin



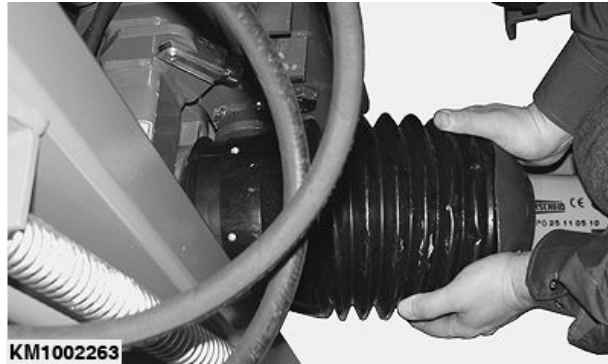
KM1002262

KM1002262 —UN—29MAR12

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KM00321,0000129 -19-29MAR12-1/3

- Slide the guard over the joint until it engages.



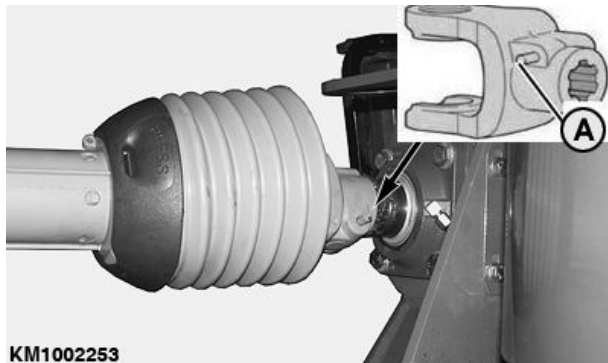
KM1002263

KM1002263 —UN—29MAR12

KM00321,0000129 -19-29MAR12-2/3

- Press sliding pin (A) and slide the joint onto the splined shaft on the forage harvester until sliding pin (A) engages in the ring-shaped groove.

A—Sliding Pin



KM1002253

KM1002253 —UN—29MAR12

KM00321,0000129 -19-29MAR12-3/3

Change the Hydraulic System

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



KM1002264

KM1002264 —UN—29MAR12

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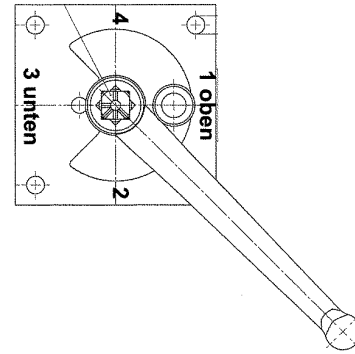
KM00321,000012D -19-29MAR12-1/2

Ball cock positions

1—Position for Maize

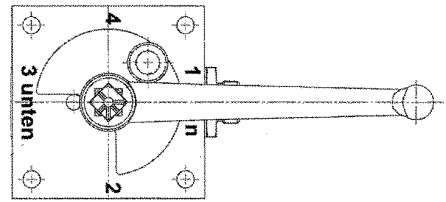
2—Position for Grass

1



KM1002265

2



KM1002266

KM1002265 —UN—29MAR12

KM1002266 —UN—29MAR12

KM00321,000012D -19-29MAR12-2/2

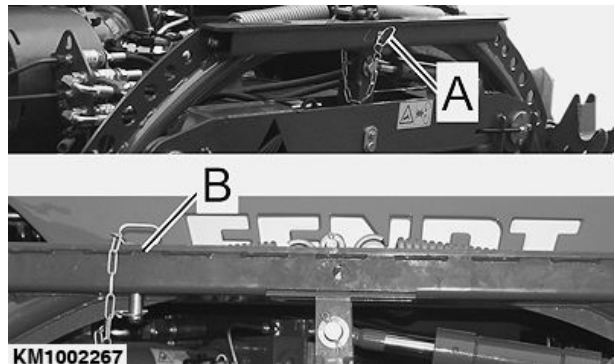
Unlock the Oscillating Frame

Remove locking pin (A) and insert it in hole (B) in the oscillating frame.

NOTE: The oscillating frame is now unlocked.

A—Locking Pin

B—Hole



KM1002267

KM1002267 —UN—29MAR12

KM00321,000012F -19-29MAR12-1/1

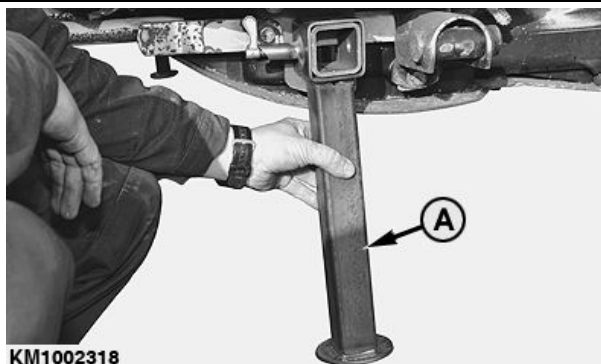
Detaching the Rotary Harvesting Unit

Install Front Jackstands (Rotary Harvesting Units for KRONE Forage Harvesters Only)

Before detaching the rotary harvesting unit, install front jackstands (A) on both sides.

CAUTION: When working underneath the rotary harvesting unit, it must be supported securely.

A—Jackstand



KM1002318 —UN—18JUN12

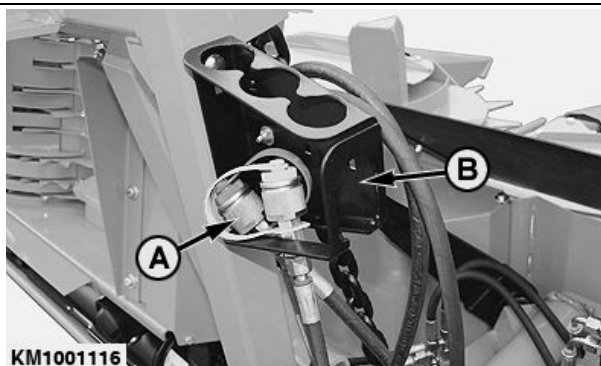
KM00321,0000193 -19-27JUN12-1/1

Detach Rotary Harvesting Unit

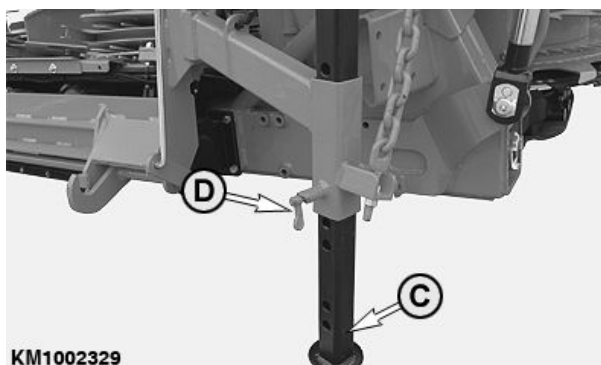
1. Lower the rotary harvesting unit onto a flat level surface.
2. Shut off the forage harvester's engine, remove the key from the ignition and apply the park brake.
3. Disconnect the electrical connector and hydraulic couplers (A) from the forage harvester and store them in provided bracket (B).
4. Pull off the drive shaft.
5. At left and right, lower jackstands (C) and lock them at a suitable height. To do this, pull out spring-loaded pin (D) and let it re-engage when the jackstand has reached the correct height.

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

6. Disengage the lock on the rotary harvesting unit's attaching frame.
7. Start the forage harvester, lower the feed roll housing further and drive out of the rotary harvesting unit's attaching frame.



KM1001116 —UN—18FEB10



KM1002329 —UN—10AUG12

A—Hydraulic Couplers
B—Bracket

C—Jackstand
D—Pin

KM00321,0000192 -19-08AUG12-1/1

Transport

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.

KM00321,000027A -19-19FEB10-1/1

KM00321,000027A -19-19FEB10-1/1

[illegible]

KM225012 —UN—02DEC14

KM00321,000035A -19-05JAN15-1/1

Rotary Harvesting Units with Comfort Support Wheel



A—Comfort Support Wheel

Rotary harvesting units equipped for installation of the comfort support wheel (A) may be driven on public roads only if the comfort support wheel is actually attached.

See supplementary Operator's Manual for support wheel 300F.

KM00321,0000540 -19-20JUN16-1/1

Accident Prevention (Rotary Harvesting Units with Lateral Protective Brackets)



- A—Accident Prevention Device B—Curtains
C—Clearance and Indicator Lights D—Protective Bracket

When driving on public roads, the entire area around the dividers must be secured by accident prevention device (A) and curtains (B).

Installation:

1. After the rotors have come to a complete stop, fold up the side sections.

NOTE: When folding up the rotary harvesting unit, lateral protective brackets (D) will swing into transport position automatically.

2. Fold out accident prevention device (A) and attach to outer dividers.
3. Install curtains (B) on side sections and secure using rubber rings.

4. The skid shoes, blades and other edges are covered with curtains (B).

Clearance and indicator lights:

Before driving on public roads, connect the wiring harness of clearance and indicator lights (C) to the socket provided on the forage harvester.

Ground clearance:

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

KM00321,0000194 -19-29JUN12-1/1

Accident Prevention (Rotary Harvesting Units without Lateral Protective Brackets)

When driving on public roads, the entire area around the dividers must be secured by accident prevention device (C) and curtains (A).

Clearance and indicator lights:

Before driving on public roads, connect the wiring harness of clearance and indicator lights (B) to the socket provided on the forage harvester.

Ground clearance:

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



KM1001119

A—Curtains
B—Clearance and Indicator
Lights

C—Accident Prevention Device

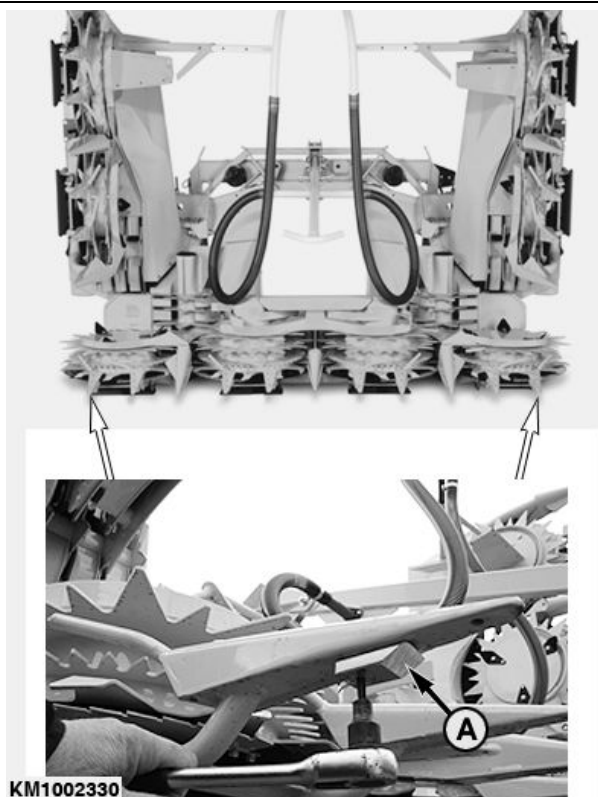
KM1001119 —UN—19FEB10

KM00321,000035B -19-16DEC14-1/4

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



KM1002330

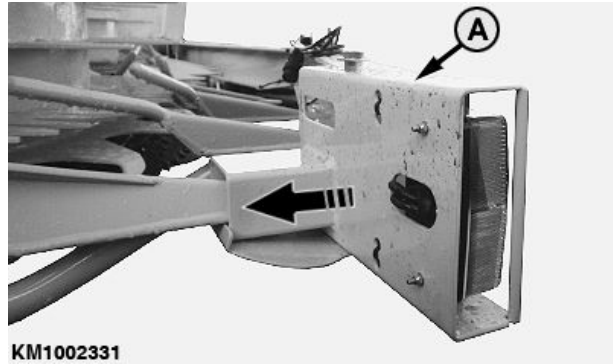
KM1002330 —UN—29JUN12

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KM00321,000035B -19-16DEC14-2/4

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

A—Accident Prevention Device



KM1002331

KM1002331—UN—29JUN12

KM00321,000035B -19-16DEC14-3/4

4. Put curtains on the accident prevention device.
5. Fix curtains using a rubber rope.

IMPORTANT: Follow the correct sequence (see illustration).



KM225013

KM225013—UN—02DEC14

KM00321,000035B -19-16DEC14-4/4

Set AHC sensors in the transport position

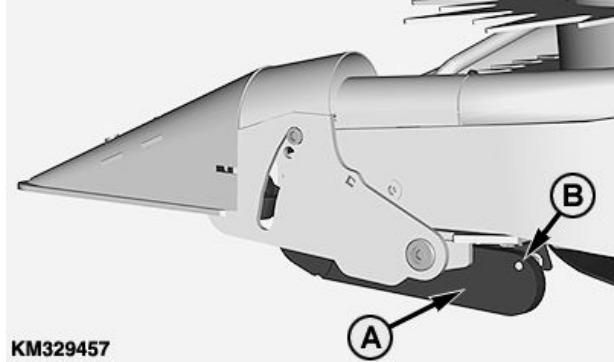
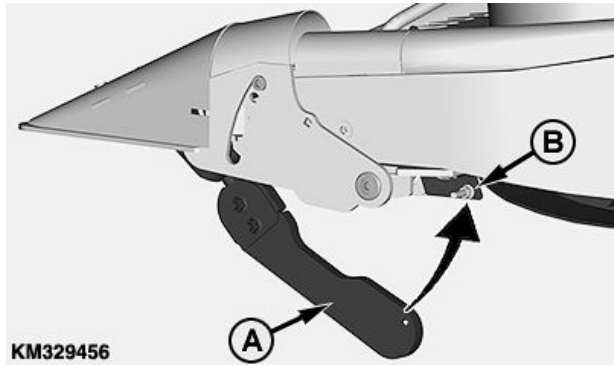
345^{plus} and 360^{plus} models only

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 procedure on the other side.

A—AHC sensor

B—Screw



KM329456 —UN—28AUG17

KM329457 —UN—28AUG17

KM00321,000081E -19-05JUL18-1/1

Lock/Unlock Tilt Frame (Rotary Harvesting Units for CLAAS Forage Harvesters Only)

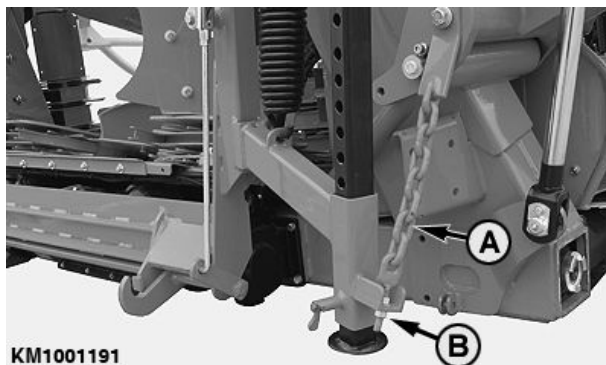
CAUTION: To prevent unintended movement of the rotary harvesting unit when driving on public roads, always lock the tilt frame.

The rotary harvesting unit must be folded up (transport position) when driving on public roads. In this position, the rotary harvesting unit is protected from pivoting by two chains (A).

With the harvesting unit in transport position, regularly re-tension the chains (A) using nut (B) so that a clearance (X) of approx. 1 mm (0.04 in.) is maintained between the chain links to avoid twisting and ensure a proper function.

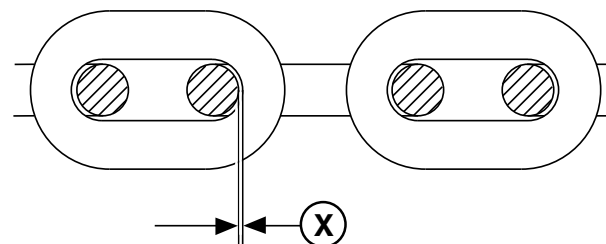
A—Chain
B—Nut

X—1 mm (0.04 in.)



KM1001191

KM1001191 —UN—28APR10



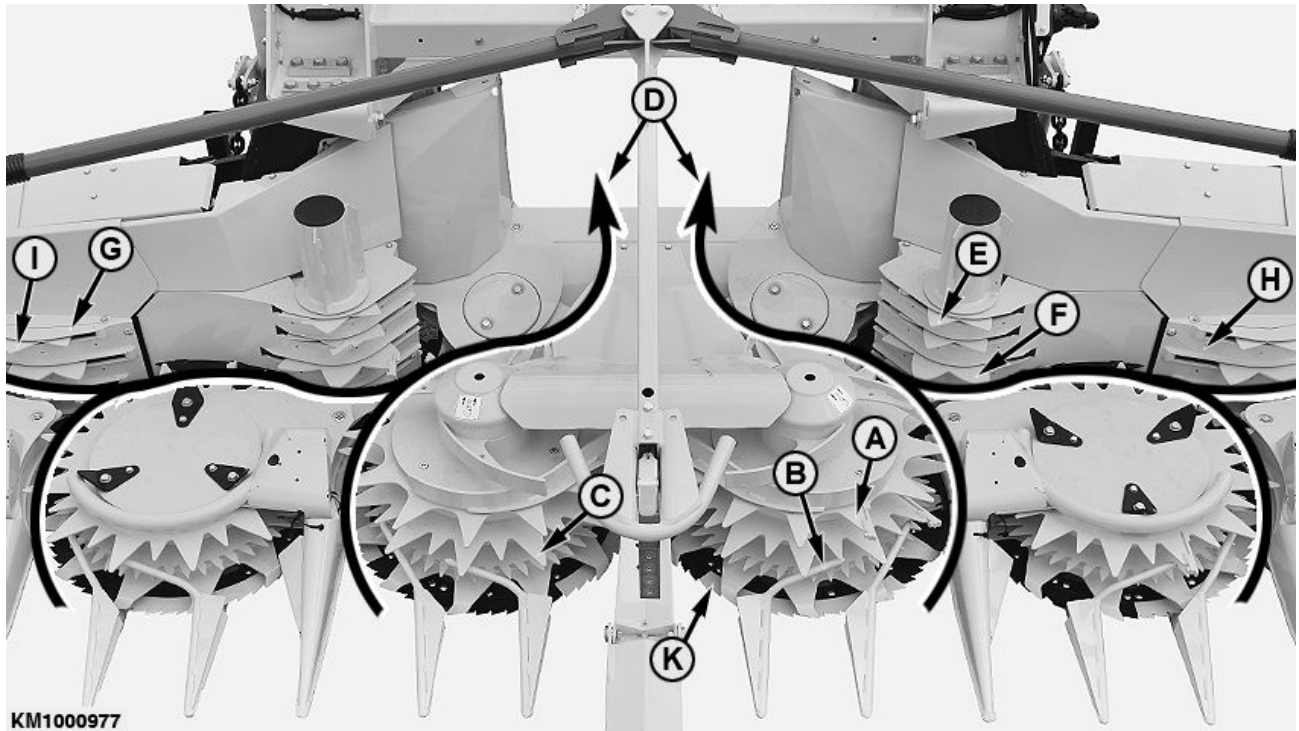
ZX1040571

ZX1040571 —UN—12APR07

KM00321,0000196 -19-29JUN12-1/1

Operating the Rotary Harvesting Unit

Rotary Harvesting Unit Method of Operation



A—Gathering drum
B—Intake bar
C—Row of teeth

D—Direction of crop
E—Gathering drums
F—Feed teeth

G—Cross feed drums
H—Guides and scrapers
I—Feed teeth

K—Rotating blade

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 from which direction the harvester approaches the row. They can be approached end-on, at right angles or at an oblique angle if so desired.

None of the stalks can escape the area covered by the rotating blades. Although no stationary knife is used, the fast rotating rotary blades (K) cut all the stalks within the unit's operating width. The slowly rotating feeder house

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 (I) and so the stalks are conveyed along the guides and scrapers (H) 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.

KM00321,000081F -19-06JUL18-1/1

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.

KM00321,000020F -19-24AUG09-1/1

Clear Blockages

CAUTION: Risk of serious injury! Never 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.

During harvesting, most blockages can be cleared by briefly reversing the gathering drums.

KM00321,0000192 -19-09JUN09-1/1

Clear Blockages on CLAAS Forage Harvesters

When blockages occur, the gathering drums can be stopped and then reversed.

To clear blockages:

- Stop driving the machine.
- Drive the forage harvester backwards a short distance.
- Briefly press button (A) and wait until feeder and rotary harvesting unit have stopped.
- Press button (A) again and hold until the blockage is cleared.

NOTE: The reversing process takes place as long as button (A) is pressed.

CAUTION: Risk of serious injury! Never 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—Button



KM1001192

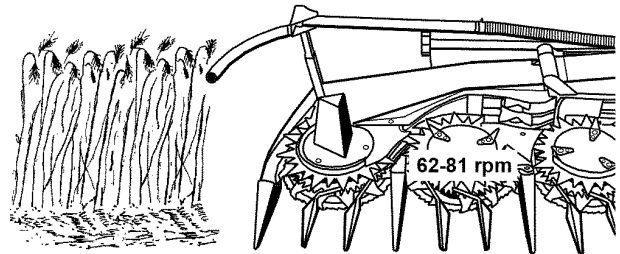
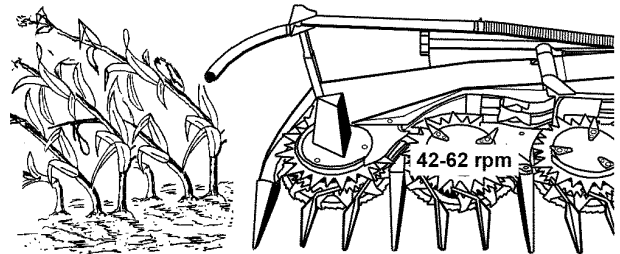
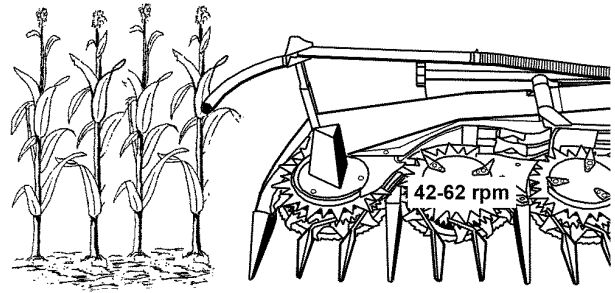
KM1001192—UN—28APR10

KM00321,0000198 -19-29JUN12-1/1

Gathering Drum Operating Speeds

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

NOTE: The speed at which the gathering drums operate can be adjusted.



KM1000978

KM1000978 —UN—24AUG09

KM00321,0000199 -19-29JUN12-1/1

Adjusting the Lengths of Cut in Conjunction with KRONE Forage Harvester

The maximum permissible speed at the drive of the KRONE Forage Harvester is 760 rpm.

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

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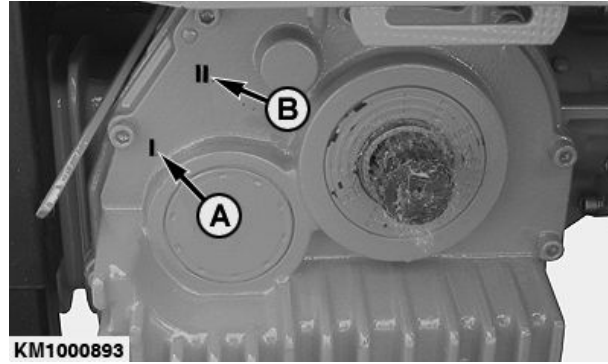
Length-of-Cut Adjustment with CLAAS Forage Harvester

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.



A—1st gear

B—2nd gear

KM00321,0000281 -19-22FEB10-1/1

KM1000893 —UN—08JUN09

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

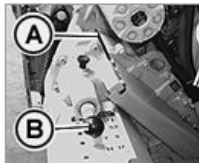
See tables below to determine length-of-cut adjustment.

NOTE: The two-speed gear box (V) is optional. The ratio of the standard gear box equals the 1st gear of the two-speed gear box.

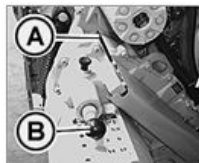
Cutterhead with 24 Knives (Types 492, 496, and 500)



I



II



III



IV



V



VI

KM1001219

KM1001219 —UN—16JUN10

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 (0.16 in.)	1	Slow	Slow	1	42
5,5 mm (0.22 in.)	1	Fast	Fast	1	51
7 mm (0.28 in.)	2	Slow	Slow	2	53
9 mm (0.35 in.)	2	Fast	Fast	1	51
14 mm (0.55 in.)	3	Slow	Slow	2	53
17 mm (0.67 in.)	3	Fast	Fast	2	64

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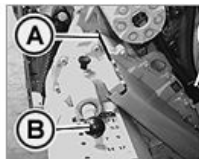
KM00321,0000B00 -19-05OCT20-1/2

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

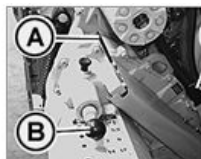


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KM1001219 —UN—16JUN10

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 (0.20 in.)	1	Slow	Slow	1	42
6,5 mm (0.26 in.)	1	Fast	Fast	1	51
8,5 mm (0.33 in.)	2	Slow	Slow	2	53
11 mm (0.43 in.)	2	Fast	Fast	1	51
17 mm (0.67 in.)	3	Slow	Slow	2	53
21 mm (0.83 in.)	3	Fast	Fast	2	64

KM00321,0000B00 -19-05OCT20-2/2

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

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.

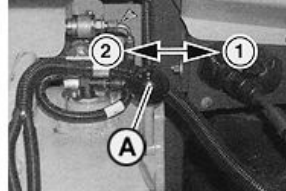
Cutterhead with 28 knives (type 493)

Two-speed gear box (III) for normal to long length of cut (standard)



KM1001220

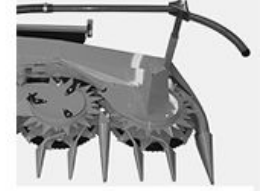
I



II



III



IV

KM1001220 — UN—16JUN10

I—Length of cut, number of knives		II—Length-of-cut transmission, forage harvester	III—Rotary harvesting unit drive	IV—Gathering drum speed
2x14 knives	2x7 knives	Gear	Gear	rpm
5.1 mm (0.20 in.)	10.2 mm (0.40 in.)	1	1	51
6.0 mm (0.24 in.)	12.0 mm (0.47 in.)		1	51
6.9 mm (0.27 in.)	13.8 mm (0.54 in.)		1	51
7.7 mm (0.30 in.)	15.4 mm (0.60 in.)		1	51
8.6 mm (0.34 in.)	17.2 mm (0.68 in.)		2	64
6.9 mm (0.27 in.)	13.8 mm (0.54 in.)	2	1	51
7.7 mm (0.30 in.)	15.4 mm (0.60 in.)		1	51
8.6 mm (0.34 in.)	17.2 mm (0.68 in.)		2	64
9.4 mm (0.37 in.)	18.8 mm (0.74 in.)		2	64
10.3 mm (0.41 in.)	20.6 mm (0.81 in.)		2	64
11.1 mm (0.44 in.)	22.2 mm (0.87 in.)		2	64
12.0 mm (0.47 in.)	24.0 mm (0.94 in.)		2	64

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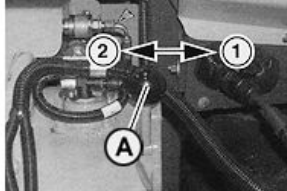
KM00321,0000317 -19-16JUN10-1/6

Cutterhead with 28 knives (type 493)

Two-speed gear box (III) for short length of cut (option)



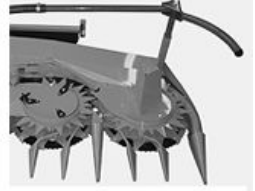
I



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III



IV

KM1001220

KM1001220 —UN—16JUN10

I—Length of cut, number of knives		II—Length-of-cut transmission, forage harvester	III—Rotary harvesting unit drive	IV—Gathering drum speed
2x14 knives	2x7 knives	Gear	Gear	rpm
3.4 mm (0.13 in.)	6.8 mm (0.27 in.)	1	2	41
4.3 mm (0.17 in.)	8.6 mm (0.34 in.)		2	41
5.1 mm (0.20 in.)	10.2 mm (0.40 in.)		2	41
6.0 mm (0.24 in.)	12.0 mm (0.47 in.)		2	41
6.9 mm (0.27 in.)	13.8 mm (0.54 in.)		1	51
7.7 mm (0.30 in.)	15.4 mm (0.61 in.)		1	51
8.6 mm (0.34 in.)	17.2 mm (0.68 in.)		1	51
6.9 mm (0.27 in.)	13.8 mm (0.54 in.)	2	1	51
7.7 mm (0.30 in.)	15.4 mm (0.61 in.)		1	51
8.6 mm (0.34 in.)	17.2 mm (0.68 in.)		1	51
9.4 mm (0.37 in.)	18.8 mm (0.74 in.)		1	51

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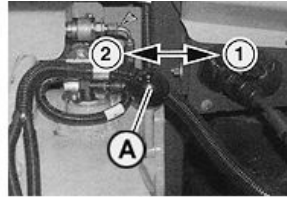
KM00321,0000317 -19-16JUN10-2/6

Cutterhead with 24 knives (type 493)

Two-speed gear box (III) for normal to long length of cut (standard)



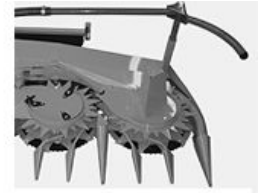
I



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KM1001220 —UN—16JUN10

KM1001220

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 (0.24 in.)	12 mm (0.47 in.)	1	1	51
7 mm (0.28 in.)	14 mm (0.55 in.)		1	51
8 mm (0.31 in.)	16 mm (0.63 in.)		1	51
9 mm (0.35 in.)	18 mm (0.71 in.)		1	51
10 mm (0.39 in.)	20 mm (0.79 in.)		2	64
8 mm (0.31 in.)	16 mm (0.63 in.)	2	1	51
9 mm (0.35 in.)	18 mm (0.71 in.)		1	51
10 mm (0.39 in.)	20 mm (0.79 in.)		2	64
11 mm (0.43 in.)	22 mm (0.87 in.)		2	64
12 mm (0.47 in.)	24 mm (0.94 in.)		2	64
13 mm (0.51 in.)	26 mm (1.02 in.)		2	64
14 mm (0.55 in.)	28 mm (1.10 in.)		2	64

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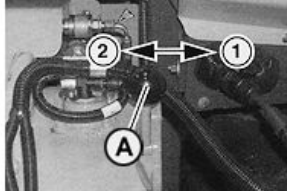
KM00321,0000317 -19-16JUN10-3/6

Cutterhead with 24 knives (type 493)

Two-speed gear box (III) for short length of cut (option)



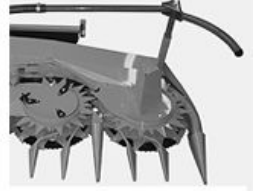
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KM1001220

KM1001220 —UN—16JUN10

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
4 mm (0.16 in.)	8 mm (0.31 in.)	1	2	41
5 mm (0.20 in.)	10 mm (0.39 in.)		2	41
6 mm (0.24 in.)	12 mm (0.47 in.)		2	41
7 mm (0.28 in.)	14 mm (0.55 in.)		2	41
8 mm (0.31 in.)	16 mm (0.63 in.)		1	51
9 mm (0.35 in.)	18 mm (0.71 in.)		1	51
10 mm (0.39 in.)	20 mm (0.79 in.)		1	51
8 mm (0.31 in.)	16 mm (0.63 in.)	2	1	51
9 mm (0.35 in.)	18 mm (0.71 in.)		1	51
10 mm (0.39 in.)	20 mm (0.79 in.)		1	51
11 mm (0.43 in.)	22 mm (0.87 in.)		1	51

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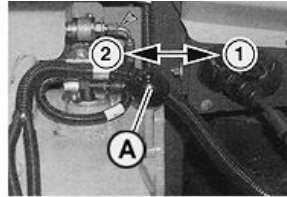
KM00321,0000317 -19-16JUN10-4/6

Cutterhead with 20 knives (type 493)

Two-speed gear box (III) for normal to long length of cut (standard)



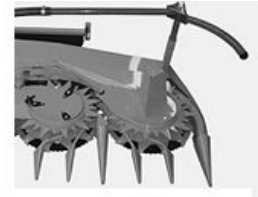
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KM1001220 —UN—16JUN10

KM1001220

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 (0.29 in.)	14.7 mm (0.58 in.)	1	1	51
8.5 mm (0.33 in.)	17.0 mm (0.67 in.)		1	51
9.7 mm (0.38 in.)	19.3 mm (0.76 in.)		1	51
10.8 mm (0.43 in.)	21.7 mm (0.85 in.)		1	51
12 mm (0.47 in.)	24 mm (0.94 in.)		2	64
10 mm (0.39 in.)	20 mm (0.79 in.)	2	1	51
11.2 mm (0.44 in.)	22.4 mm (0.88 in.)		1	51
12.4 mm (0.49 in.)	24.8 mm (0.98 in.)		2	64
13.6 mm (0.54 in.)	27.2 mm (1.07 in.)		2	64
14.8 mm (0.58 in.)	29.6 mm (1.17 in.)		2	64
16 mm (0.63 in.)	32 mm (1.26 in.)		2	64
17.2 mm (0.68 in.)	34.4 mm (1.35 in.)		2	64

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KM00321,0000317 -19-16JUN10-5/6

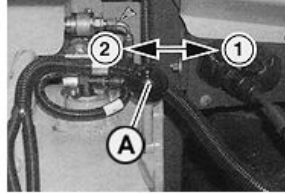
Cutterhead with 20 knives (type 493)

Two-speed gear box (III) for short length of cut (option)



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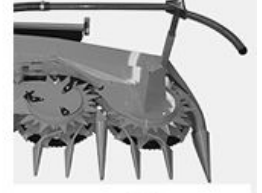
KM1001220



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III



IV

KM1001220 —UN—16JUN10

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
5.0 mm (0.20 in.)	10.0 mm (0.39 in.)	1	2	41
6.2 mm (0.24 in.)	12.3 mm (0.48 in.)		2	41
7.3 mm (0.29 in.)	14.7 mm (0.58 in.)		2	41
8.5 mm (0.33 in.)	17.0 mm (0.67 in.)		2	41
9.7 mm (0.38 in.)	19.3 mm (0.76 in.)		1	51
10.8 mm (0.43 in.)	21.7 mm (0.85 in.)		1	51
12.0 mm (0.47 in.)	24.0 mm (0.94 in.)		1	51
10.0 mm (0.39 in.)	20.0 mm (0.79 in.)	2	1	51
11.2 mm (0.44 in.)	22.4 mm (0.88 in.)		1	51
12.4 mm (0.49 in.)	24.8 mm (0.98 in.)		1	51
13.6 mm (0.53 in.)	27.2 mm (1.07 in.)		1	51

KM00321,0000317 -19-16JUN10-6/6

Length of cut and drum speed with forage harvesters 930-990 (Types 494, 497, 498, 499, 502)

Preselect length of cut on forage harvester

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 three versions:

- **Speed increase** for normal length of cut (standard)
- **Speed reduction** for long length of cut in combination with a cutterhead with 36 knives (option)
- **Speed reduction** for short length of cut (option)

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



KM1002334

A—Switch

KM1002334 —UN—28JUN12

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KM00321,0000B01 -19-05OCT20-1/6

Cutterhead with 36 knives (Types 494, 497, 498, 499, 502)

Two-speed gear box (II) for normal length of cut (standard)

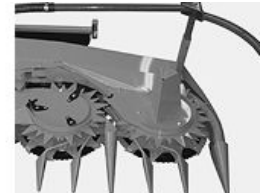


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KM1002335—UN—29JUN12

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	51
4,7 mm (0.18 in.)	9,4 mm (0.37 in.)	1	51
5,3 mm (0.21 in.)	10,6 mm (0.42 in.)	1	51
6,0 mm (0.24 in.)	12,0 mm (0.47 in.)	1	51
6,7 mm (0.26 in.)	13,4 mm (0.52 in.)	2	64
7,3 mm (0.29 in.)	14,6 mm (0.57 in.)	2	64
8 mm (0.31 in.)	16 mm (0.63 in.)	2	64
8,7 mm (0.34 in.)	17,4 mm (0.68 in.)	2	64
9,3 mm (0.37 in.)	18,6 mm (0.73 in.)	2	64

KM00321,0000B01 -19-05OCT20-2/6

Cutterhead with 36 knives (Types 494, 497, 498, 499, 502)

Two-speed gear box (II) for short length of cut (option)



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KM1002335



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KM1002335—UN—29JUN12

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	41
3,3 mm (0.13 in.)	6,6 mm (0.26 in.)	2	41
4,0 mm (0.16 in.)	8,0 mm (0.31 in.)	2	41
4,7 mm (0.18 in.)	9,4 mm (0.37 in.)	2	41
5,3 mm (0.21 in.)	10,6 mm (0.42 in.)	1	51
6,0 mm (0.24 in.)	12,0 mm (0.47 in.)	1	51
6,7 mm (0.26 in.)	13,4 mm (0.52 in.)	1	51
7,3 mm (0.29 in.)	14,6 mm (0.57 in.)	1	51

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KM00321,0000B01 -19-05OCT20-3/6

Cutterhead with 36 knives (Types 494, 497, 498, 499, 502)

Two-speed gear box (II) for long length of cut (option)

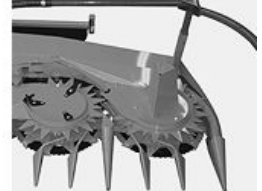


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KM1002335 —UN—29JUN12

I—Length of cut, number of knives		II—Rotary harvesting unit drive	III—Gathering drum speed
2x18 knives	2x9 knives	Gear	rpm
6,0 mm (0.24 in.)	12,0 mm (0.47 in.)	1	51
6,7 mm (0.26 in.)	13,4 mm (0.52 in.)	2	74
7,3 mm (0.29 in.)	14,6 mm (0.57 in.)	2	74
8,0 mm (0.31 in.)	16 mm (0.63 in.)	2	74
8,7 mm (0.34 in.)	17,4 mm (0.68 in.)	2	74
9,3 mm (0.37 in.)	18,6 mm (0.73 in.)	2	74
10,0 mm (0.39 in.)	20 mm (0.79 in.)	2	74
10,7 mm (0.42 in.)	21,4 mm (0.84 in.)	2	74
11,3 mm (0.44 in.)	22,6 mm (0.88 in.)	2	74
12,0 mm (0.47 in.)	24 mm (0.94 in.)	2	74

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KM00321.0000B01 -19-05OCT20-4/6

Cutterhead with 24 knives (Types 494, 497, 498, 499, 502)

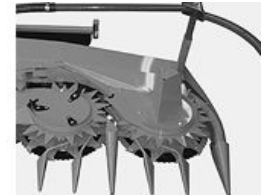
Two-speed gear box (II) for normal length of cut (standard)



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③

KM1002335—UN—29JUN12

KM1002335

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	51
7 mm (0.28 in.)	14 mm (0.55 in.)	1	51
8 mm (0.31 in.)	16 mm (0.63 in.)	1	51
9 mm (0.35 in.)	18 mm (0.71 in.)	1	51
10 mm (0.39 in.)	20 mm (0.79 in.)	2	64
11 mm (0.43 in.)	22 mm (0.87 in.)	2	64
12 mm (0.47 in.)	24 mm (0.94 in.)	2	64
13 mm (0.51 in.)	26 mm (1.02 in.)	2	64
14 mm (0.55 in.)	28 mm (1.10 in.)	2	64

KM00321,0000B01 -19-05OCT20-5/6

Cutterhead with 24 knives (Types 494, 497, 498, 499, 502)

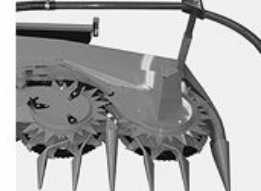
Two-speed gear box (II) for short length of cut (option)



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②



③

KM1002335—UN—29JUN12

KM1002335

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	41
5 mm (0.20 in.)	10 mm (0.39 in.)	2	41
6 mm (0.24 in.)	12 mm (0.47 in.)	2	41
7 mm (0.28 in.)	14 mm (0.55 in.)	2	41
8 mm (0.31 in.)	16 mm (0.62 in.)	1	51
9 mm (0.35 in.)	18 mm (0.71 in.)	1	51
10 mm (0.39 in.)	20 mm (0.79 in.)	1	51
11 mm (0.43 in.)	22 mm (0.87 in.)	1	51

KM00321,0000B01 -19-05OCT20-6/6

Adjusting Gear Selection with Multi-Speed Drive for CLAAS Forage Harvesters

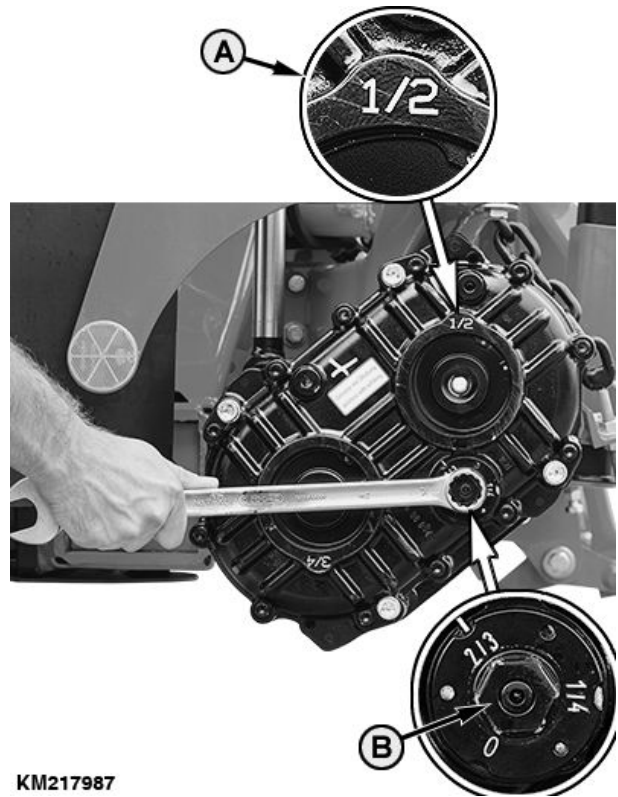
The multi-speed drive for CLAAS forage harvesters has 4 speeds.

The first 2 speeds are selected by turning nut (B) on the outside of the drive.

The entire multi-speed drive can be rotated so that 2 more speeds (A) can be selected.

With the drive in the position shown, the first and second speeds can be selected.

A—Drive Position for First and Second Speeds
B—Nut (Second Speed Engaged)



KM217987

KM217987 —UN—15SEP14

KM00321,000035C -19-03DEC14-1/3

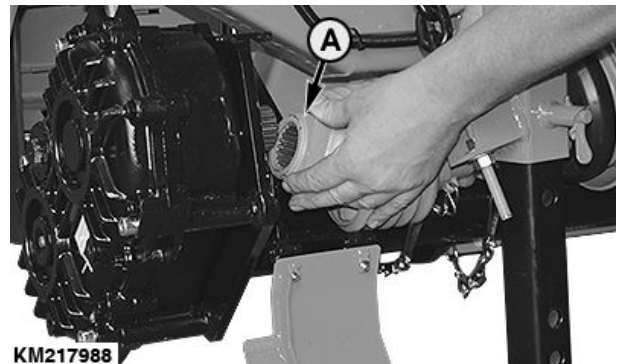
Rotate the multi-speed drive

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

To do this, proceed as follows:

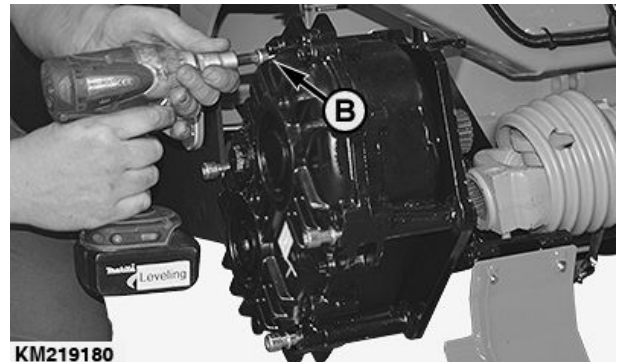
1. Remove u.j. shaft (A) from drive.
2. Loosen hex. socket screws (B).

A—U.J. Shaft
B—Hex. Socket Screws



KM217988

KM217988 —UN—15SEP14



KM219180

KM219180 —UN—15SEP14

Continued on next page

KM00321,000035C -19-03DEC14-2/3

- Rotate drive (C) through 180°.

NOTE: The drive can be rotated without taking it off.

- Tighten hex. socket screws (D) to specification.

Specification

Drive, Hex. Socket

Screws—Torque..... 95 N·m (70 lb.-ft.)

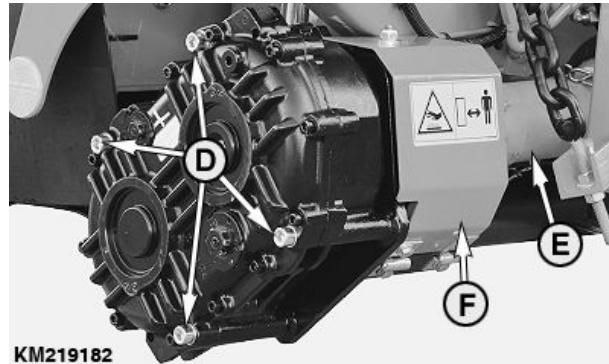
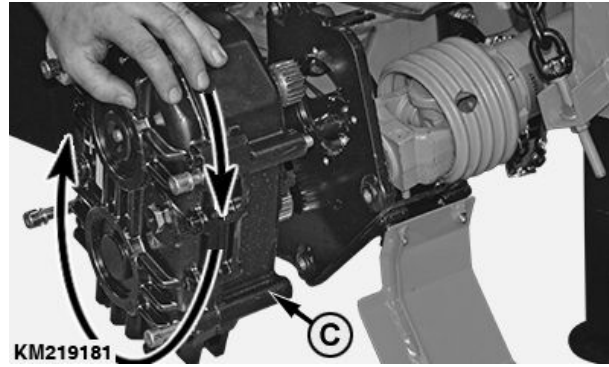
- Re-install u.j. shaft (E) and shield (F).

C—Drive

E—U.J. Shaft

D—Hex. Socket Screws

F—Shield



KM219181—UN—15SEP14

KM219182—UN—15SEP14

KM00321,000035C -19-03DEC14-3/3

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	-	-	-	-	-

IMPORTANT: Class Forage Harvesters of types 498, 499 and 502 equipped with a variable attachment drive can change speed within the cutting length settings. In order to prevent very excessive drum speed, you cannot use the 4th gear of the multi-speed transmission here.

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

KM00321,0000B04 -19-05OCT20-1/1

Calibrate Steering Assistance (Rotary Harvesting Units for CLAAS Forage Harvesters)

CLAAS forage harvesters, Types 492 and 493:

Disconnect the calibration plug (A).

IMPORTANT: Do NOT reconnect the calibration plug (A).

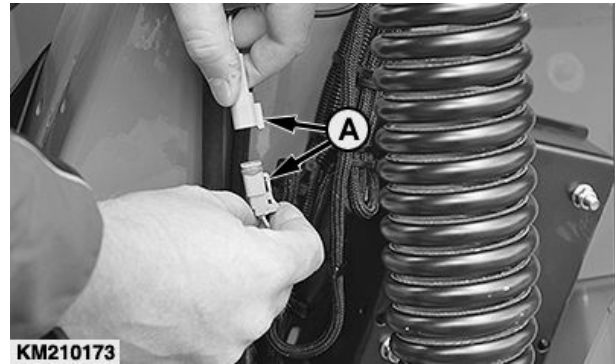
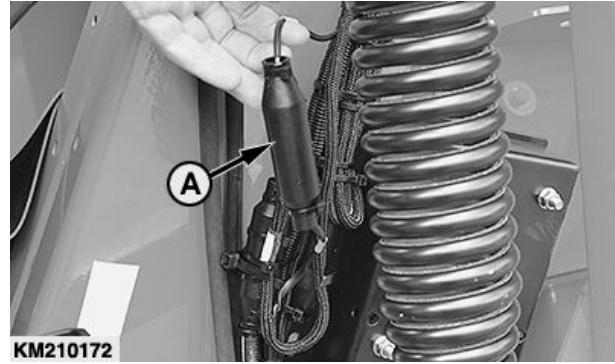
CLAAS Forage Harvester types 494, 496 and 500:

Disconnect calibration plug (A) before calibrating the steering assistance.

NOTE: See forage harvester operator's manual for calibration of the steering assistance.

IMPORTANT: Reconnect calibration plug (A) after calibrating the steering assistance.

A—Calibration Plug



KM210172 —UN—31MAR14

KM210173 —UN—31MAR14

KM00321.0000B02 -19-05OCT20-1/1

Harvesting - General

Before the harvest, do the following:

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

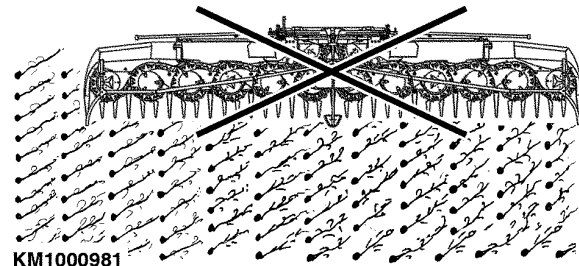
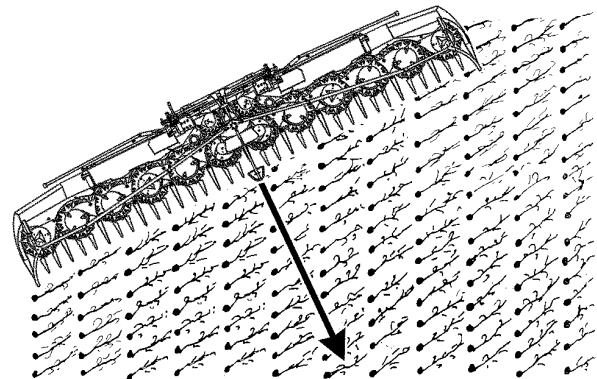
IMPORTANT: Avoid unnecessary wear at the clutches.
Always select forward gear from the idle setting.

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 rotary cutters 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 flow of crop quickly.



KM1000981

KM1000981 —UN—25AUG09

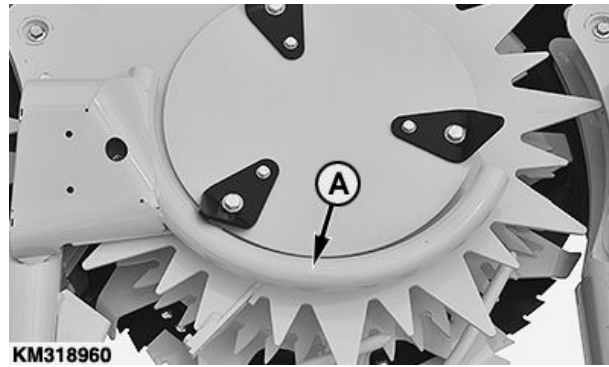
KM00321.0000212 -19-16FEB10-1/1

Harvesting Whole-Crop Silage

In case of poor crop flow when harvesting whole-crop silage, remove guide tubes (A) from the drums and the rotary harvesting unit.

NOTE: The two inner drums do not have removable guide tubes.

A—Guide tubes



KM318960 —UN—24JUL17

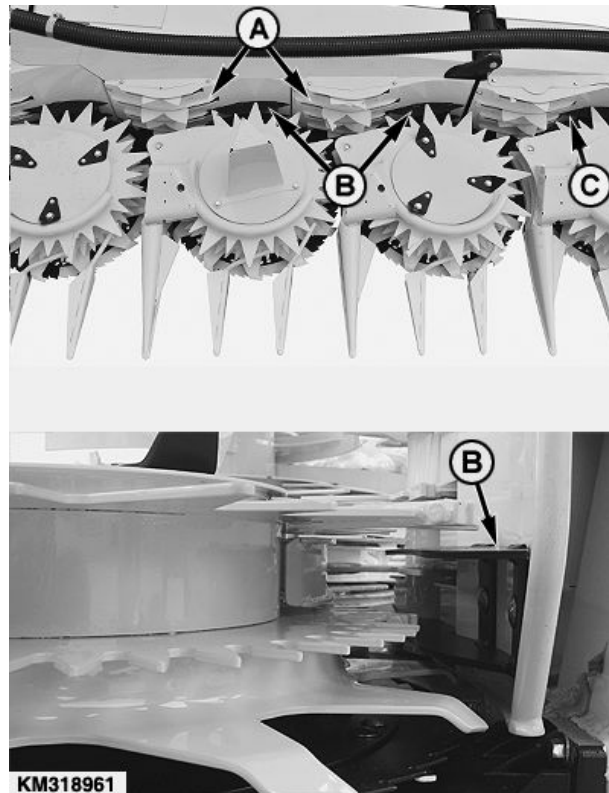
KM00321,000081C -19-05JUL18-1/2

Remove guides (B) from the inner cross feed drum scrapers (A) on each side of the rotary harvesting unit.

NOTE: The outer guides (C) can remain in the machine.

NOTE: Illustration shows the 12-row rotary harvesting unit 390^{plus}.

A—Cross feed drum scrapers C—Guides (Outer)
B—Guides (Inner)

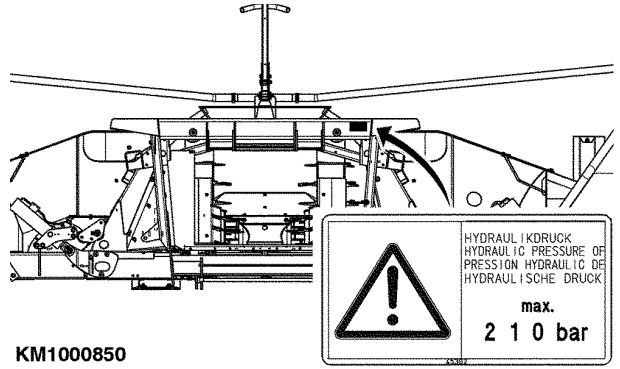


KM318961 —UN—21JUL17

KM00321,000081C -19-05JUL18-2/2

Hydraulic System

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



KM1000850

KM1000850 — UN — 03APR09

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

Additional Equipment

Special Kit for Row Guidance (Steering Assistance)

When driving a forage harvester 90% of the driver's attention is focused on steering. Use of the entire machine capacities is thus only possible with assisted steering.

A special kit is available as an attachment and is composed of:

- (1) sensor system with connecting cables
- (1) set of hardware for installation on rotary harvesting unit
- (1) assembly instructions

KM00321,0000272 -19-16FEB10-1/1

Automatic Height Control Kit

The automatic height control system consists of two sensors at both outer dividers that are touching the ground (following the ground contours) and keep the rotary harvesting unit parallel to the ground.

The electric impulses of the sensors are converted into hydraulic oil quantity by the SPFH main control unit.

See forage harvester Operator's Manual for operation of automatic height control.

A cylinder is retracted or extended depending on the oil quantity so that the rotary harvesting unit is always aligned parallel to the ground.

KM00321,0000289 -19-24FEB10-1/1

Troubleshooting

Correction of Defects on the Rotary Harvesting Unit

remove ignition key and wait until all moving parts have come to a stop.

CAUTION: Before carrying out adjustment or service work, ALWAYS shut off engine,

Symptom	Problem	Solution
Power requirement becomes excessive	Dull blades	Replace the blades.
	Defective cleaners	Install new cleaners.
Rotating blades do not rotate evenly	Accumulation of leaves under the rotating blades, dirt in the area of the drums	Clean the rotating blades daily or as often as required when the machine is in continuous operation.
	Defective cleaners	Install new cleaners.
Rotary harvesting unit is vibrating	Imbalance caused by asymmetrical blades	Replace mating blades.
	One of the cleaners has broken	Replace both cleaners.
	Imbalance caused by dirt inside the rotating blade	Clean rotating blade.
	Excessive vertical play of rotating blade	Straighten the blades or install new blades.
Accumulation of husks at the scrapers	Scrapers not correctly positioned	See Service section.
Stalks are pushed to the front before they are cut (long, uneven stubble)	Leaves accumulated at the small dividers	Clean the dividers.
	One of the cleaners has broken	Replace both cleaners.
	Rotating blades are dull	Replace the blades.
Transmission overheating	Excess or lack of oil in the transmission	Check transmission oil level.
Gathering or feed drums have stopped rotating (rotating blades are still rotating)	Accumulation of crop in the feeding area	Reverse forage harvester feed rolls. Repeat this step if necessary.
	Defective transmission	Contact your KEMPER dealer.
The outer gatherer drums and rotating blades stop rotating	Defective claw clutch (shift collar)	Contact your KEMPER dealer.
The entire l.h. or r.h. side of the unit stops rotating	L.h. or r.h. friction clutch defective	Contact your KEMPER dealer.
Obstruction in hydraulic system of outer folding section	A foreign body (e.g. grain of sand) is obstructing the restrictor	Contact your KEMPER dealer.
Steering assistance does not calibrate (rotary harvesting units for CLAAS forage harvesters)	Calibration plug still connected.	Disconnect calibration plug before calibrating the steering assistance.

Continued on next page

KM00321,00002E4 -19-01APR14-1/2

Troubleshooting

Symptom	Problem	Solution
Steering assistance does not respond (rotary harvesting units for CLAAS forage harvesters) Steering assistance steers in opposite direction (rotary harvesting units for CLAAS forage harvesters)	Sensor voltage incorrect	Check voltage readings.
	Row finder too close to sensor due to its curvature, therefore voltage values too high.	Move row finder into a straight position.
	Sensor selection plug is not suitably adjusted for forage harvester.	Move sensor selection plug to Digital (Pin 3) or Analog (Pin 1 or 2), see assembly instructions, power steering.
	UCC box defective	Check and replace UCC box if necessary.
	Electrical short in wiring harness.	Check wiring harness.
	Steering assistance not calibrated	Calibrate steering assistance.
	Incorrect voltage readings	Check voltage readings.
	Signal leads reversed	Check and replace signal lead if necessary.
	UCC box defective	Check and replace UCC box if necessary.

KM00321,00002E4 -19-01APR14-2/2

Lubrication and Maintenance

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.

OUKM001,0000012 -19-15FEB05-1/1

Grease

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

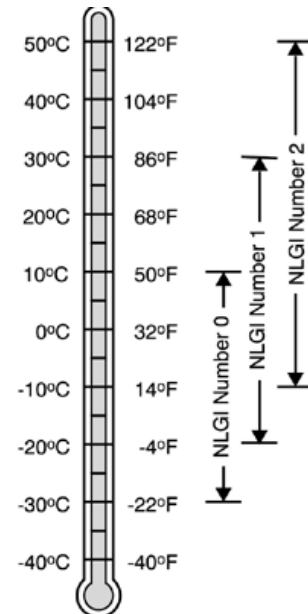
AVIA AVIALITH 2 EP grease is recommended.

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.

KM1000899



KM1000899 — JUN — 08JUN09

KM00321,00002CB -19-03MAY10-1/1

Fluid Grease for Drives

The spur gear angle drives of the feed drums are filled with fluid grease.

The following fluid greases are recommended:

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

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

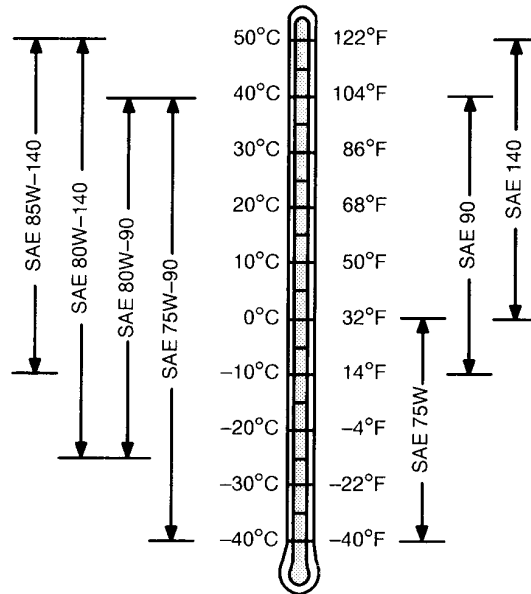
NLGI Service Classification NLGI 00

KM00321,00002CC -19-30APR10-1/1

Transmission 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.



TS1653—UN—14MAR96

KM00321,0000195 -19-10JUN09-1/1

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.

KM00321,0000196 -19-10JUN09-1/1

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.

KM00321,0000197 -19-10JUN09-1/1

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.

KM00321,0000198 -19-10JUN09-1/1

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.

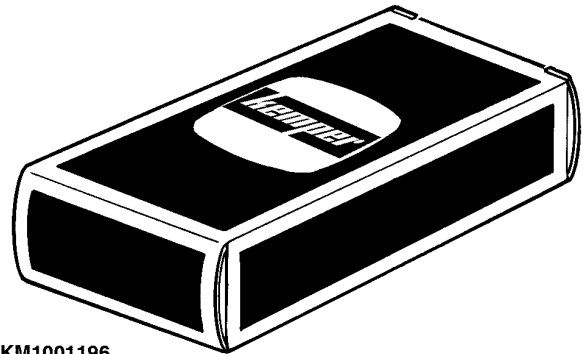
DX,LUBST -19-11APR11-1/1

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.

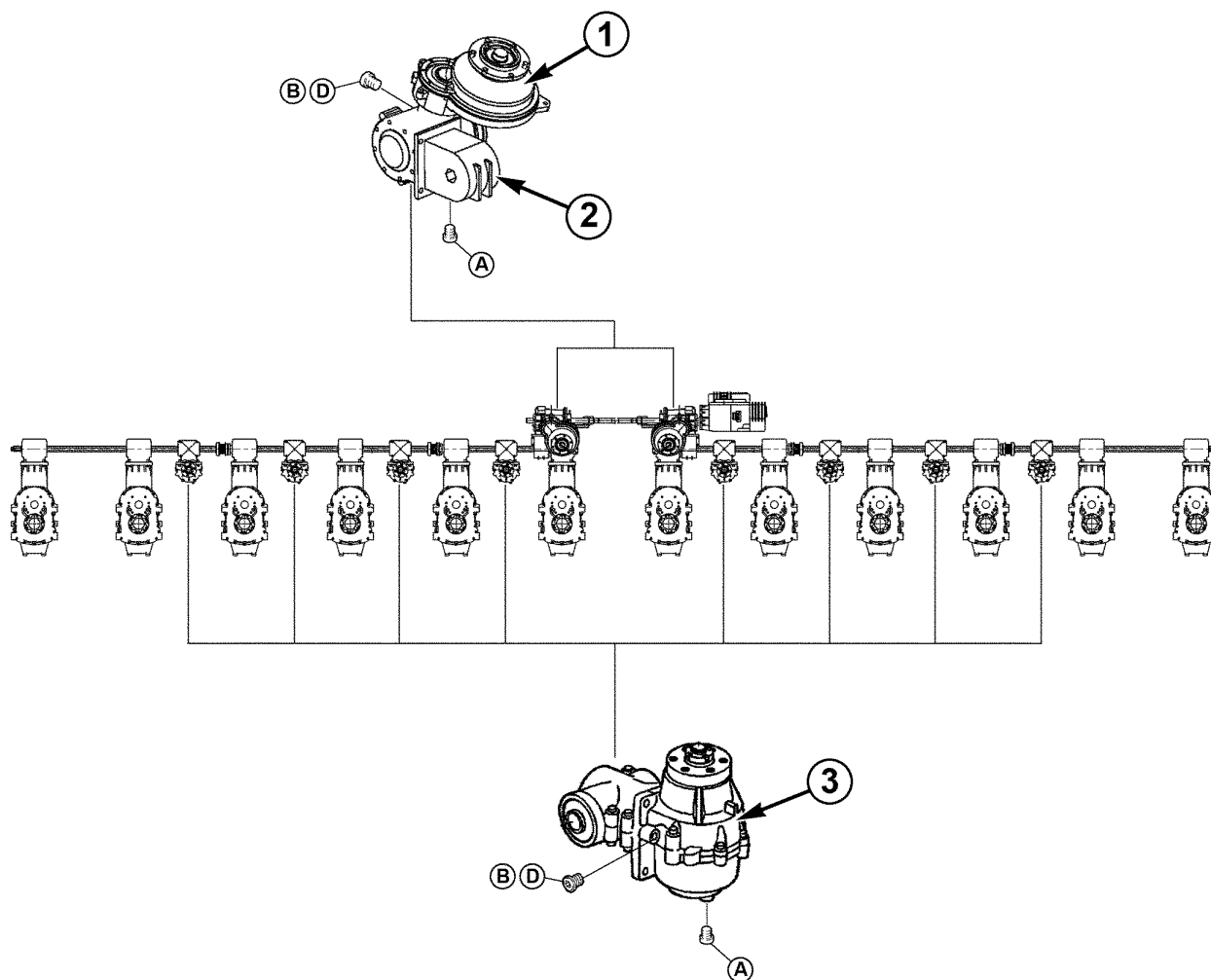


KM1001196

KM1001196 —UN—03MAY10

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Overview of Transmissions and Oil Levels



KM1002337

390^{plus} Rotary Harvesting Unit shown

- | | |
|---|---|
| A—Oil Drain Plug | 2—Spur-Gear Angle Drive - 1,0 L
(0.26 US. gal) |
| B—Oil Filler Plug | 3—Spur-Gear Angle Drive of
Cross Feed Drums - 0,85 L
(0.22 US. gal) |
| D—Oil level plug | |
| 1—Spur-Gear Angle Drive of
Feed Drums (with a lifetime
filling of fluid grease) | |

Rotary Harvesting Unit Transmissions

NOTE: The 390^{plus} Rotary Harvesting Unit has eight, the 375^{plus} has six, the 360^{plus} four and the 345^{plus} has two spur-angle drives (4) for cross feed drums.

Oil Level Check

Raise rotary harvesting unit slightly so that it is horizontal, and check oil level in transmissions and bevel gear drives. The oil level is correct if it reaches the bottom edge of oil level plug (D).

KM00321,0000B05 -19-05OCT20-1/1

KM1002337 —UN—04JUL12

Transmissions — Gathering Drums

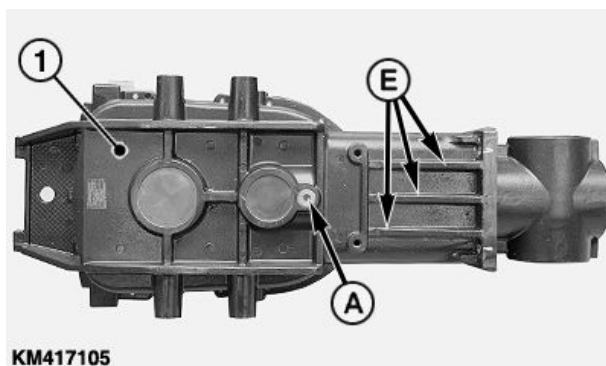
IMPORTANT: There are two series of spur-gear angle drives from different suppliers:

- Spur-gear angle drives series 1 with reinforcement ribs (E), and oil drain plug (A) in the middle.
- Spur-Gear Angle Drives, Series 2, with oil drain plug (A) on the side.

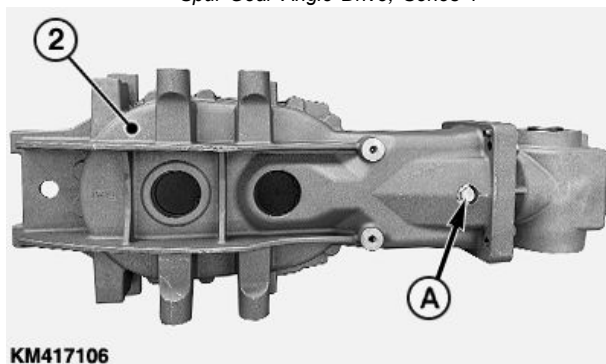
Depending on the spur-gear angle drives series, the oil level is different. Pour in the correct amount of oil. See **Gathering drum spur-gear angle drive, series 1 — Oil levels** or **Gathering drum spur-gear angle drive, series 2 — Oil levels** in this section.

A—Oil Drain Plug
E—Reinforcement Ribs

1— Spur-Gear Angle Drive,
Series 1
2— Spur-Gear Angle Drive,
Series 2



Spur-Gear Angle Drive, Series 1



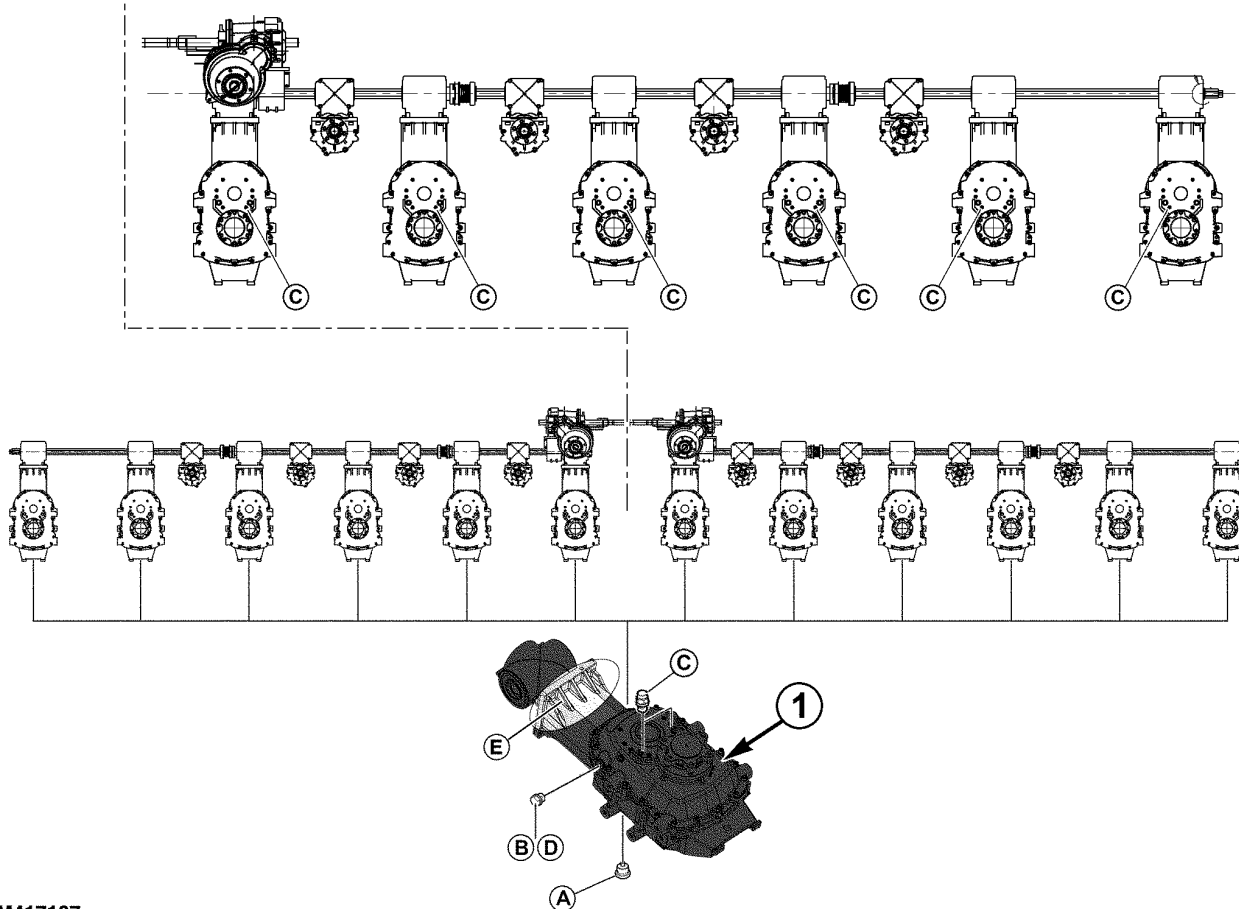
Spur-Gear Angle Drive, Series 2

KM00321.0000B06 -19-05OCT20-1/1

KM417105—UN—01SEP20

KM417106—UN—01SEP20

Gathering Drum Spur-gear angle drive, series 1 — Oil Levels



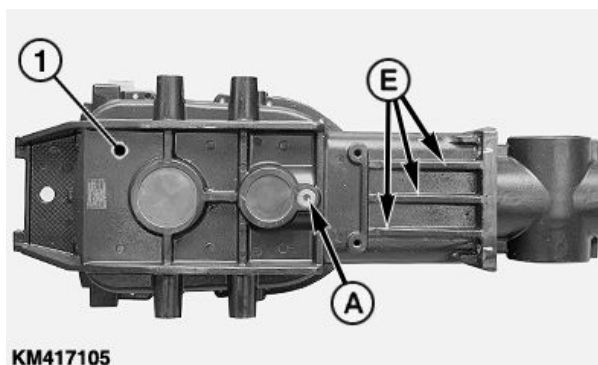
KM417107

Twelve gathering drum spur-gear angle drives (1) are used on 390^{plus}, ten on 375^{plus}, eight on 360^{plus}, and six on 345^{plus} rotary harvesting units.

IMPORTANT: Ensure that breathers (C) are always installed as shown in the illustration. This prevents oil leakage when the rotary harvesting unit is folded up.

A—Oil Drain Plug
B—Oil Filler Plug
C—Breather

D—Oil level plug
E—Reinforcement Ribs
1—Gathering Drum Spur-Gear Angle Drive - 8,5 L (2.25 US gal)



KM417105

Spur-Gear Angle Drive, Series 1

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KM00321,0000B07 -19-05OCT20-1/2

KM417107 —UN—01SEP20

KM417105 —UN—01SEP20

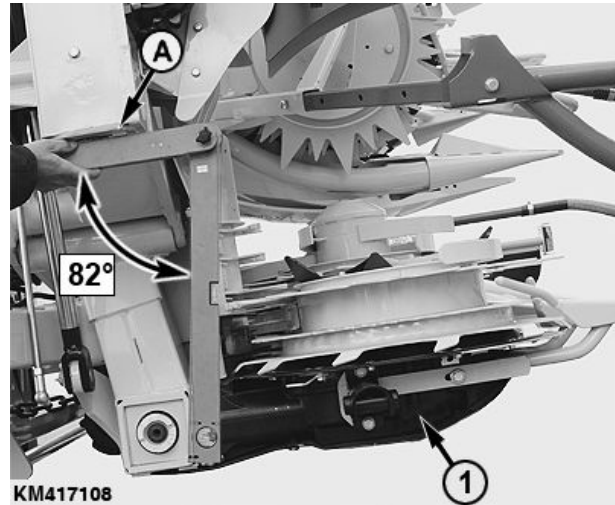
Check the oil level

Before checking the oil level in the gathering drum spur-gear angle drives (1), raise the rotary harvesting unit at an angle of 8°.

NOTE: To determine the angle, place a goniometer on the flange face (A) of the square pipe. Raise the rotary harvesting unit until a vertical angle of 82° is obtained.

Check the oil level in the gathering drum spur-gear angle drives (1). The oil level should now reach the bottom edge of the oil level plug.

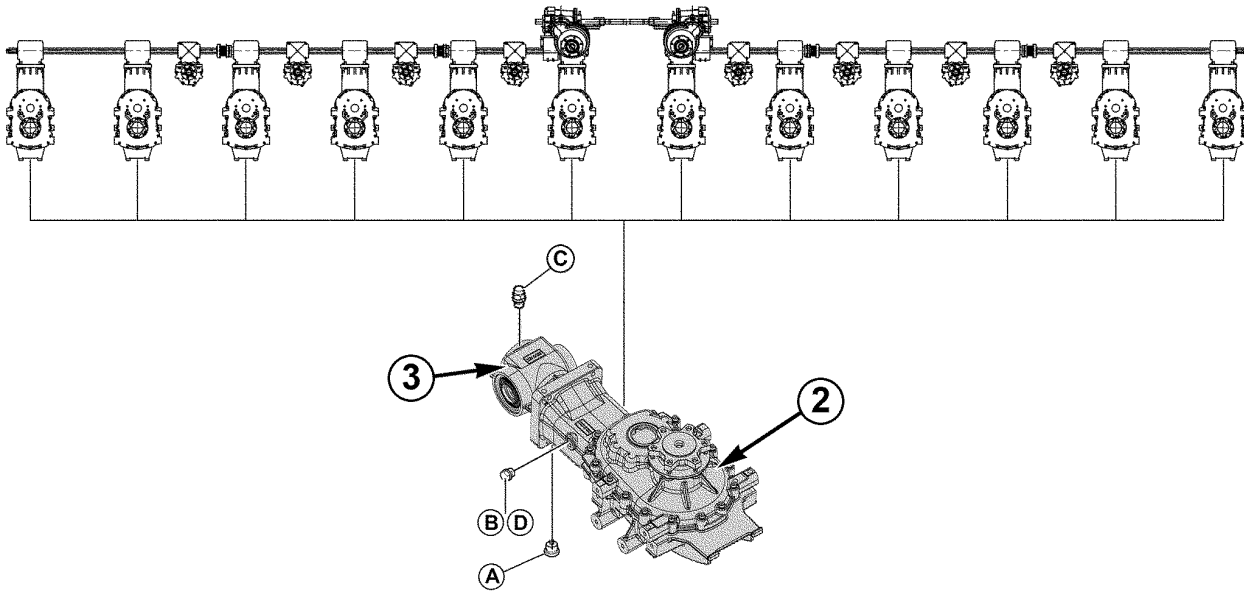
1—Gathering Drum Spur-Gear Angle Drive A—Flange Face



KM417108 —UN—01SEP20

KM00321,0000B07 -19-05OCT20-2/2

Gathering Drum Spur-gear angle drive, series 2 — Oil Levels



KM417109

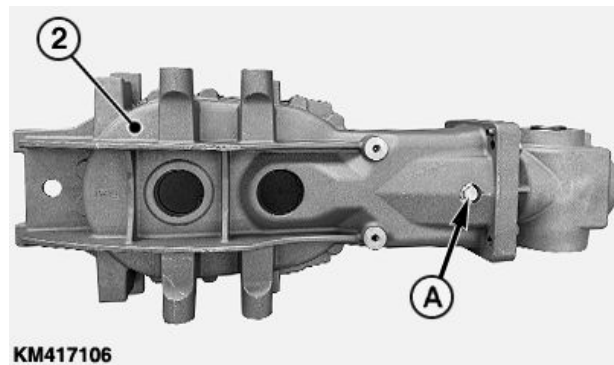
Twelve gathering drum spur-gear angle drives (2) are used on 390^{plus}, ten on 375^{plus}, eight on 360^{plus}, and six on 345^{plus} rotary harvesting units.

Check the oil level

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).

A—Oil Drain Plug
B—Oil Filler Plug
C—Breather

D—Oil level plug
2— Gathering Drum Spur-Gear Angle Drive - 2 L (0.53 US gal)
3— Angle Drive - Filled with a lifetime's supply of oil



KM417106

Spur-Gear Angle Drive, Series 2

KM417109 —UN—01SEP20

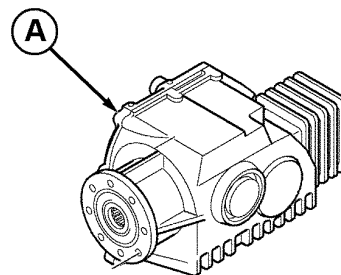
KM417106 —UN—01SEP20

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Overview of Oil Levels in Input Transmission

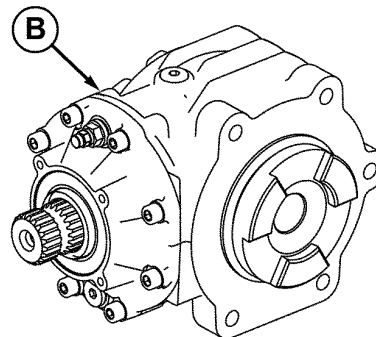
Rotary harvesting units for CLAAS forage harvesters

- A—Transmission - 4.3 L (1.14 U.S. gal.)
 B—Bevel gear drive for quick-coupler (option) - 1 L (0.26 U.S. gal.)
 C—4-Speed multi-speed gearbox (option) - 1.25 L (0.33 U.S. gal.)



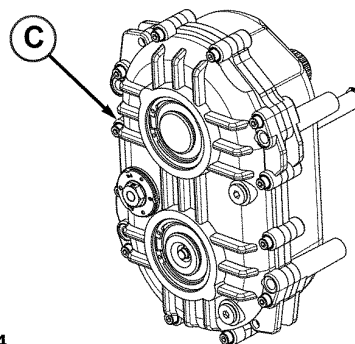
KM1002338

Manual Shift Transmission



KM219184

Bevel Gear Drive for Quick Coupler (Option)



KM225014

4-Speed Multi-Speed Gearbox (Option)

KM00321.00008BB -19-26FEB19-1/3

KM1002338 —UN—05JUL12

KM219184 —UN—15SEP14

KM225014 —UN—08DEC14

Rotary harvesting units for KRONE forage harvesters

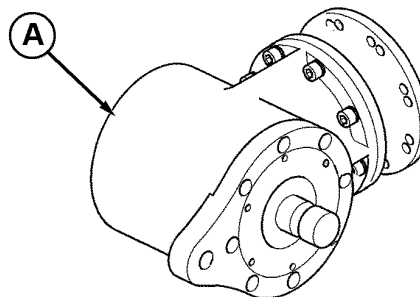
Rotary harvesting units up to serial no. 131199:

Bevel gear drive (A) is filled with HD 85 W-140 Oil - 0,9 L (0.24 U.S. gal.)

Rotary harvesting units starting with serial no. 131200:

The bevel gear drive (A) is filled with Mobil SHC 460 gear oil - 0.9 L (0.24 U.S. gal.)

- A—Bevel gear drive - 0.9 L (0.24 U.S. gal.)



KM1002339

Continued on next page

KM00321.00008BB -19-26FEB19-2/3

KM1002339 —UN—14AUG12

Rotary harvesting units for FENDT forage harvesters

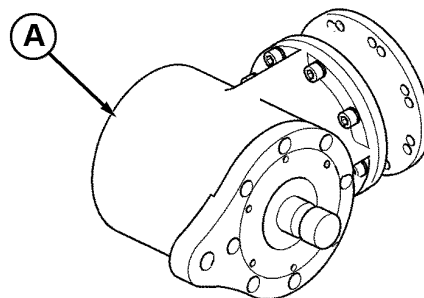
Rotary harvesting units up to serial no. 131199:

Bevel gear drive (A) is filled with HD 85 W-140 Oil - 0,9 L (0.24 U.S. gal.)

Rotary harvesting units starting with serial no. 131200:

The bevel gear drive (A) is filled with Mobil SHC 460 gear oil - 0.9 L (0.24 U.S. gal.)

A—Bevel gear drive - 0.9 L (0.24 U.S. gal.)



KM1002339

KM1002339 —UN—14AUG12

KM00321,00008BB -19-26FEB19-3/3

Changing Oil

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

Drain the oil while it is hot (i.e. after operation). Remove filler plug (B) and drain plug (A), drain oil into a suitable

container. Clean drain plug (A) before re-installing. Add the correct quantity of oil.

IMPORTANT: Do not overfill as this will result in overheating and oil leakage.

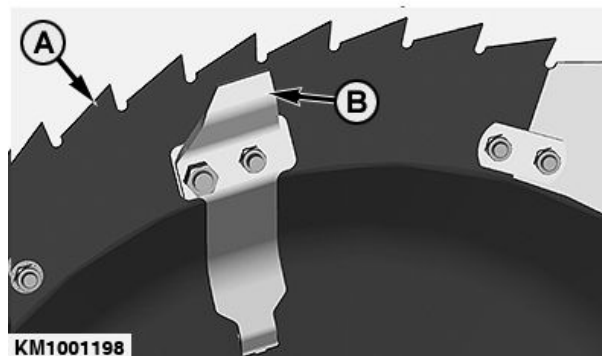
KM00321,00002DD -19-10MAY10-1/1

Every 10 Hours - Rotating Blades and Cleaners

Check all rotating blades (A) and cleaners (B) for wear. Replace worn parts (see Service Section).

A—Rotating Blade

B—Cleaner



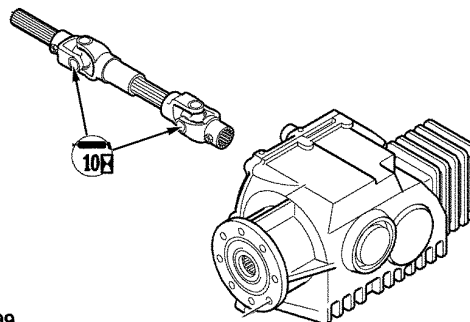
KM1001198

KM1001198 —UN—07OCT14

KM00321,00002CF -19-03MAY10-1/1

Every 10 Hours - U.J. Shaft

Lubricate with grease.



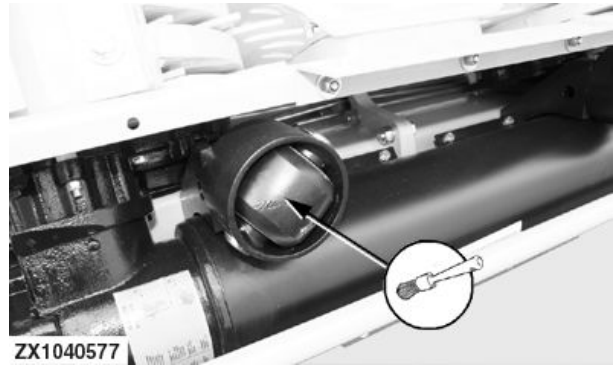
KM1001199

KM1001199 —UN—03MAY10

KM00321,00002D0 -19-03MAY10-1/1

Every 10 Hours—Lower Rolls of Oscillating Frame

Lubricate with grease.

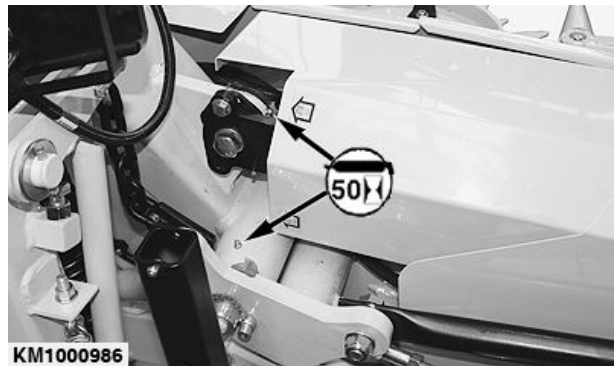


ZX1040577 —UN—12APR07

KM00321.00001B6 -19-17JUN09-1/1

Every 50 Hours - Axle Pins and Hinges (390^{plus} Only)

Lubricate with grease.



KM1000986 —UN—27AUG09

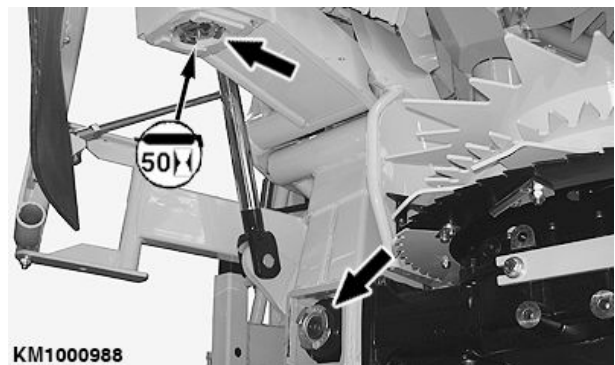
KM00321.000031C -19-16JUN10-1/1

Every 50 Hours - Clutch Claws

Clean all the clutch claws (see arrows).

Lubricate with grease.

Apply also a layer of grease to the grooved surface of the clutch claws using a brush.



KM1000988 —UN—27AUG09

KM00321.000031D -19-16JUN10-1/1

Every 50 Hours - Hinges of Outer Sections (390^{plus})

Lubricate with grease.

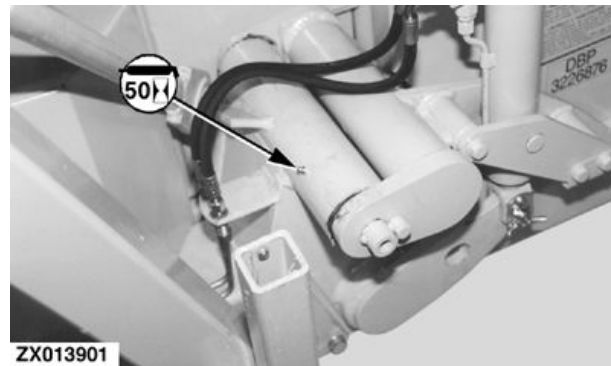


KM1000989 —UN—27AUG09

KM00321,000031F -19-16JUN10-1/1

Every 50 Hours - Hinges of Outer Sections (360^{plus}, 375^{plus} and 345^{plus})

Lubricate with grease.



ZX013901 —UN—26NOV97

KM00321,000019E -19-05JUL12-1/1

Every 50 Hours - Hydraulic Cylinder Axle Pins (390^{plus} Only)

Lubricate with grease.

NOTE: Fold the rotary harvesting unit to gain access to the grease fittings.

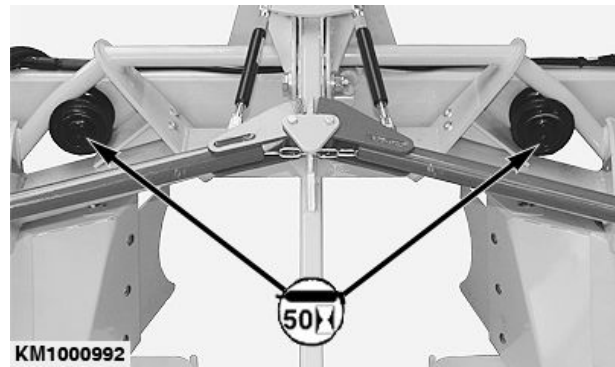


KM1000991 —UN—28AUG09

KM00321,0000320 -19-16JUN10-1/1

Every 50 Hours - Upper Rolls of Oscillating Frame

Lubricate with grease.



KM1000992 —UN—28AUG09

KM00321,00002D6 -19-04MAY10-1/1

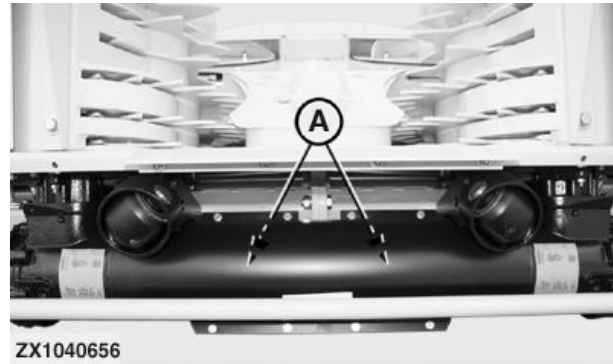
Every 3 Years—Change Coolant of Main Drive Friction Clutch

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.

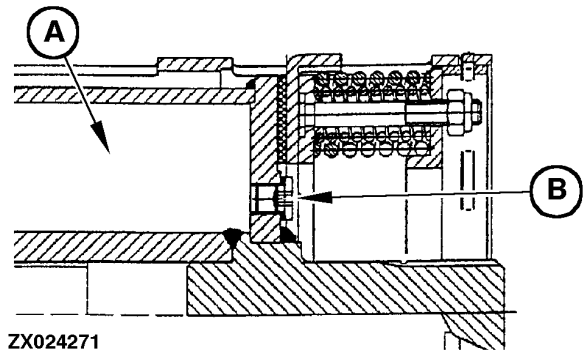
The cavity of the friction clutch (A) can be drained and refilled. This service work requires the friction clutch to be removed from the machine. Therefore it is advised to contact your KEMPER dealer to drain/refill the friction clutch.

Specification

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



ZX1040656 —UN—12APR07



ZX024271 —UN—07MAR01

KM00321,000019A -19-12JUN09-1/1

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.

OUKM001,0000014 -19-15FEB05-1/1

Daily Maintenance (Or More Often if Necessary)

Check all cleaners (blunt or incorrectly positioned cleaner will cause plugging and expose drive system and friction clutches to unnecessary load).

After operating for a few hours check that all bolts are firmly seated; this also applies after changing blades or cleaners.

Clear the area around the gathering drums, rotating blades and scrapers of husks and bits of stalk.

Check all transmissions for signs of oil leaks.

Check cutting blades and replace them if worn (dull blades will cause extremely long stubble and expose drive system and friction clutches to unnecessary load).

ZX,688RHU009812 -19-01NOV97-1/1

Weekly Service

Perform all service work listed under Daily Service in this Section.

Check if all screws are tightened to the specified torque (see table).

Remove foreign bodies from the feeding and cutting area.

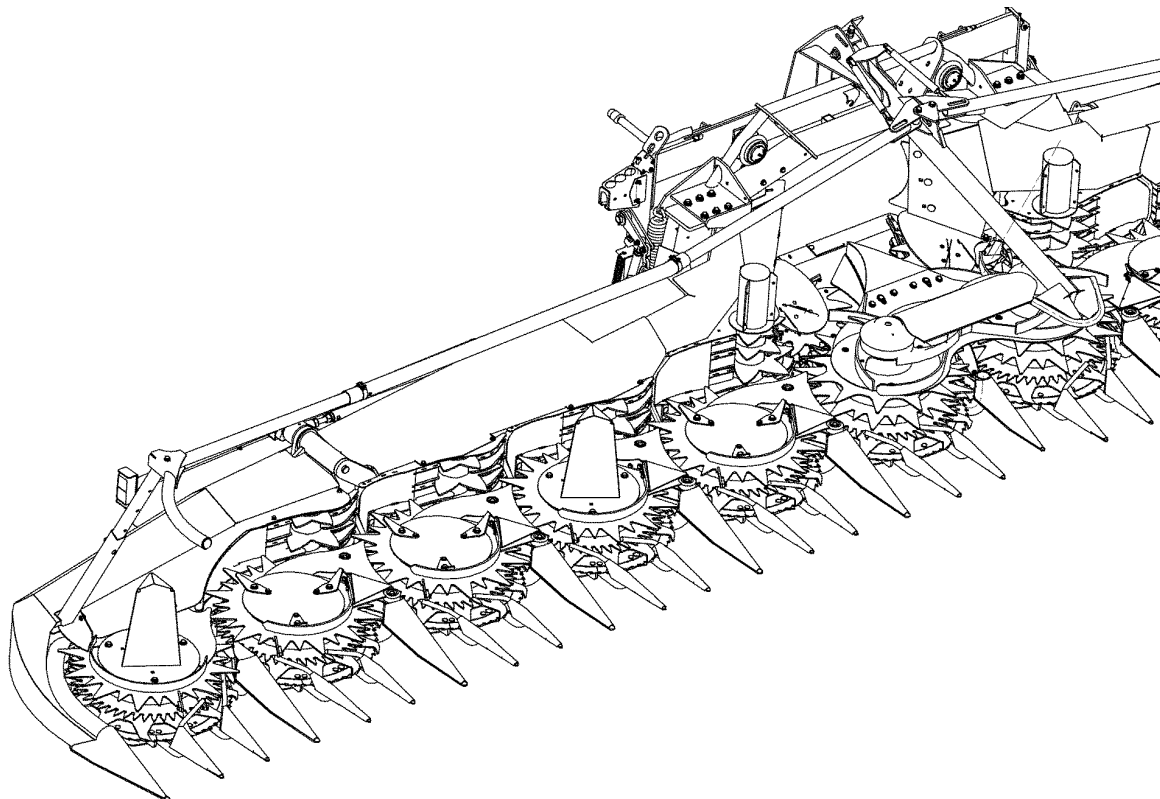
Clean clutch claws and spring assembly of the folding sections.

Check if shift pawl of clutch claws moves freely.

Check main drive friction clutch for coolant leakage. In case of escaping fluid, the friction clutch must be removed and repaired. Contact your KEMPER dealer.

KM00321,00002D7 -19-04MAY10-1/1

After Each Harvesting Season



KM1000993

390^{plus} Rotary Harvesting Unit

- Clean the rotary harvesting unit.
- Change the gear oil in all drives. See General View of Drives and Oil Levels.
- 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: Optimum performance can only be achieved with properly serviced implements.

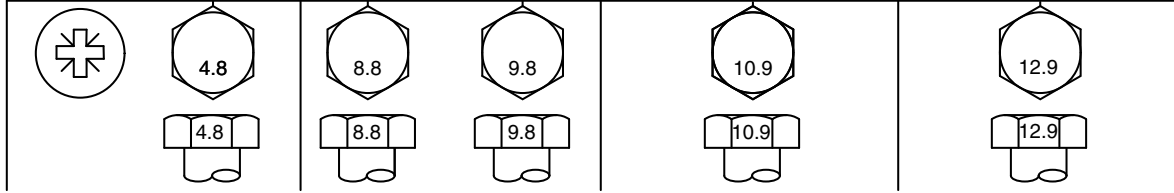
KM00321,00002D8 -19-04MAY10-1/1

KM1000993 —UN—28AUG09

Service

Metric Bolt and Screw Torque Values

TS1742 —UN—31MAY18



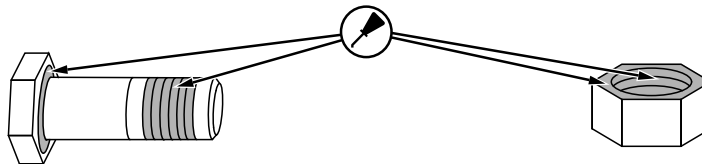
Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	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



^aHex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

^bHex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2 -19-30MAY18-1/1

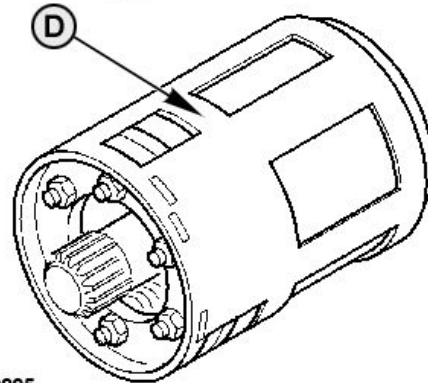
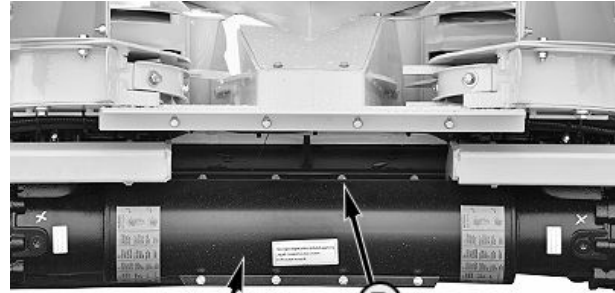
Relieve Pressure on the Main Drive Slip Clutches

- ⚠ CAUTION:** Before carrying out adjustment or service work, always:
- shut off engine
 - remove ignition key
 - wait until all moving parts have come to a stop.

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 1150 N·m (848.2 lb.-ft.) for model 390^{plus} and 900 N·m (657 lb.-ft.) for all other models.

IMPORTANT: The following steps must be carried out before operating the rotary harvesting unit for the first time and prior to every season.

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



KM1000995

KM1000995 —UN—25JUL17

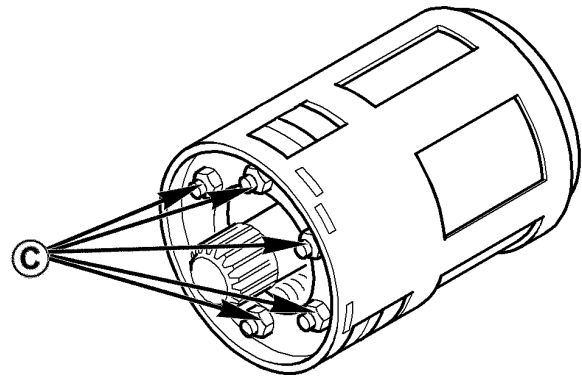
KM00321.0000321 -19-16JUN10-1/2

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

IMPORTANT: If it is not possible to rotate the slip clutch by hand, it is necessary to disassemble and clean it for proper function. See Removal of Slip Clutch and Disassemble Slip Clutch in this Section.

4. Loosen screws (C) as far as the threads allow (without removing them completely).
5. Position cover (A) and install it using screws (B).

IMPORTANT: It is recommended to have the slip clutches checked once a year by the KEMPER dealer.



KM1000041 —UN—04APR05

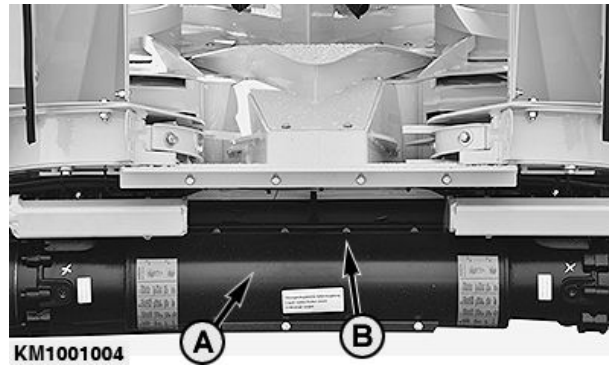
KM00321.0000321 -19-16JUN10-2/2

Removal of Slip Clutch

1. Remove cover (A). First take out screws (B).

A—Cover

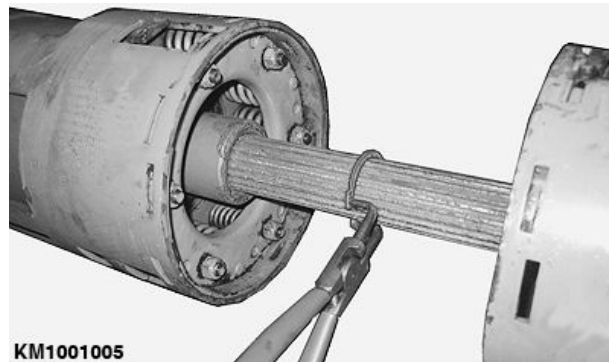
B—Screws



KM1001004 —UN—25JUL17

KM00321,000022D -19-01SEP09-1/6

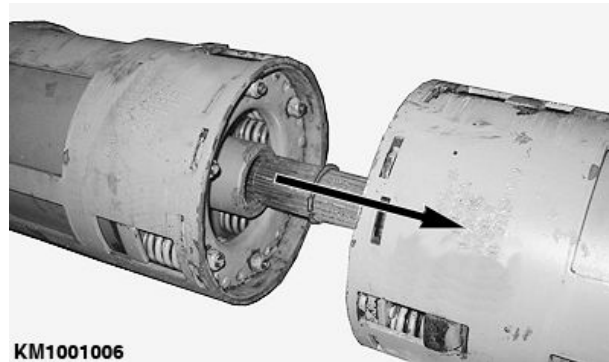
2. Open the snap rings and push them back on the splined shaft.



KM1001005 —UN—01SEP09

KM00321,000022D -19-01SEP09-2/6

3. Push the splined shaft in one slip clutch in such a way that it is completely removed from the other slip clutch.

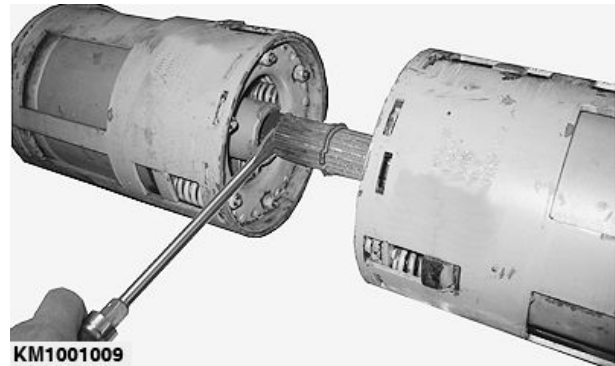


KM1001006 —UN—01SEP09

Continued on next page

KM00321,000022D -19-01SEP09-3/6

4. Secure the splined shaft with a suitable tool against slipping.

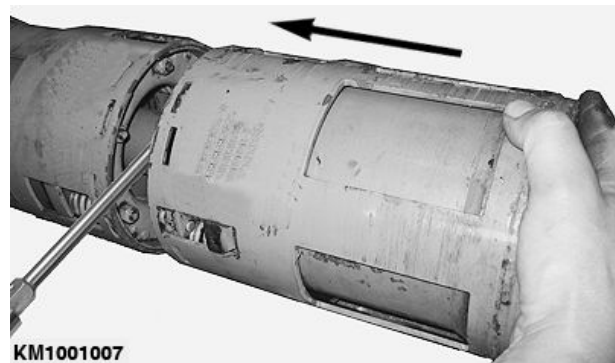


KM1001009

KM1001009 —UN—01SEP09

KM00321,000022D -19-01SEP09-4/6

5. Move the slip clutch onto the splined shaft as shown. Remove the slip clutch with splined shaft.

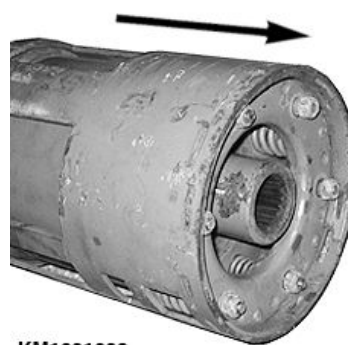


KM1001007

KM1001007 —UN—01SEP09

KM00321,000022D -19-01SEP09-5/6

6. Remove the second slip clutch.
- NOTE: Assemble slip clutches in reverse order.*



KM1001008

KM1001008 —UN—01SEP09

KM00321,000022D -19-01SEP09-6/6

Disassemble Slip Clutch

If it is not possible to rotate the slip clutch by hand as described under Relieve Pressure at the Slip Clutches on the Main Drive, it is necessary to disassemble and clean it for proper function. Proceed as follows:

1. Remove slip clutches from rotary harvesting unit. See Removal of Slip Clutch in this Section.
2. Tighten the nuts (A). This will relieve pressure on the friction plates.
3. First remove locking collar (I) from housing (B).
4. Then remove all parts of slip clutch from housing (B).
5. Clean all parts, especially friction disks (C, E). Replace worn parts.
6. Reassemble all parts.
7. Install locking collar (I) as shown in Torque Settings below.
8. Slacken off nuts (A) to the end of their threads.
9. Reinstall slip clutch on rotary harvesting unit.

Torque setting:

IMPORTANT: The specified torque of 1150 N·m (848.2 lb.-ft.) for model 390^{plus} and 900 N·m (657 lb.-ft.) for all other models must not be exceeded.

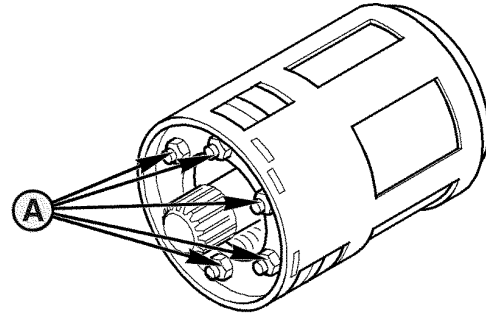
The torque is set by positioning profile (F) of locking collar (I) towards the outside. Depending on the rotary harvesting unit model, the lugs of locking collar (I) must be engaged in inner (H) or outer (G) recesses.

390^{plus} rotary harvesting unit:

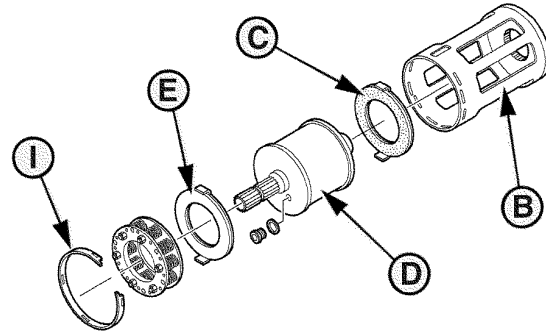
Engage the lugs of locking collar (I) in inner recesses (H) of housing (B).

345^{plus}, 360^{plus} and 375^{plus} rotary harvesting units:

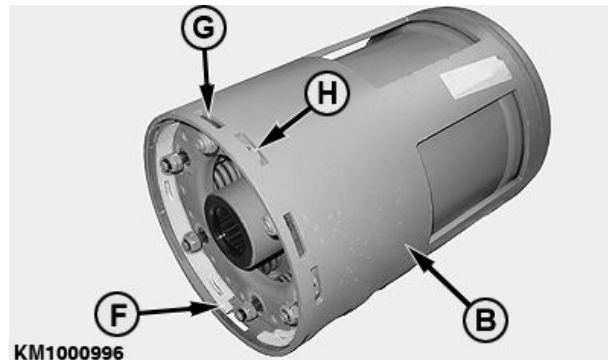
Engage the lugs of locking collar (I) in outer recesses (G) of housing (B).



KM1000160



KM1000161



KM1000996

A—Nut
B—Housing
C—Friction Disk
D—Coolant 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— Locking Collar

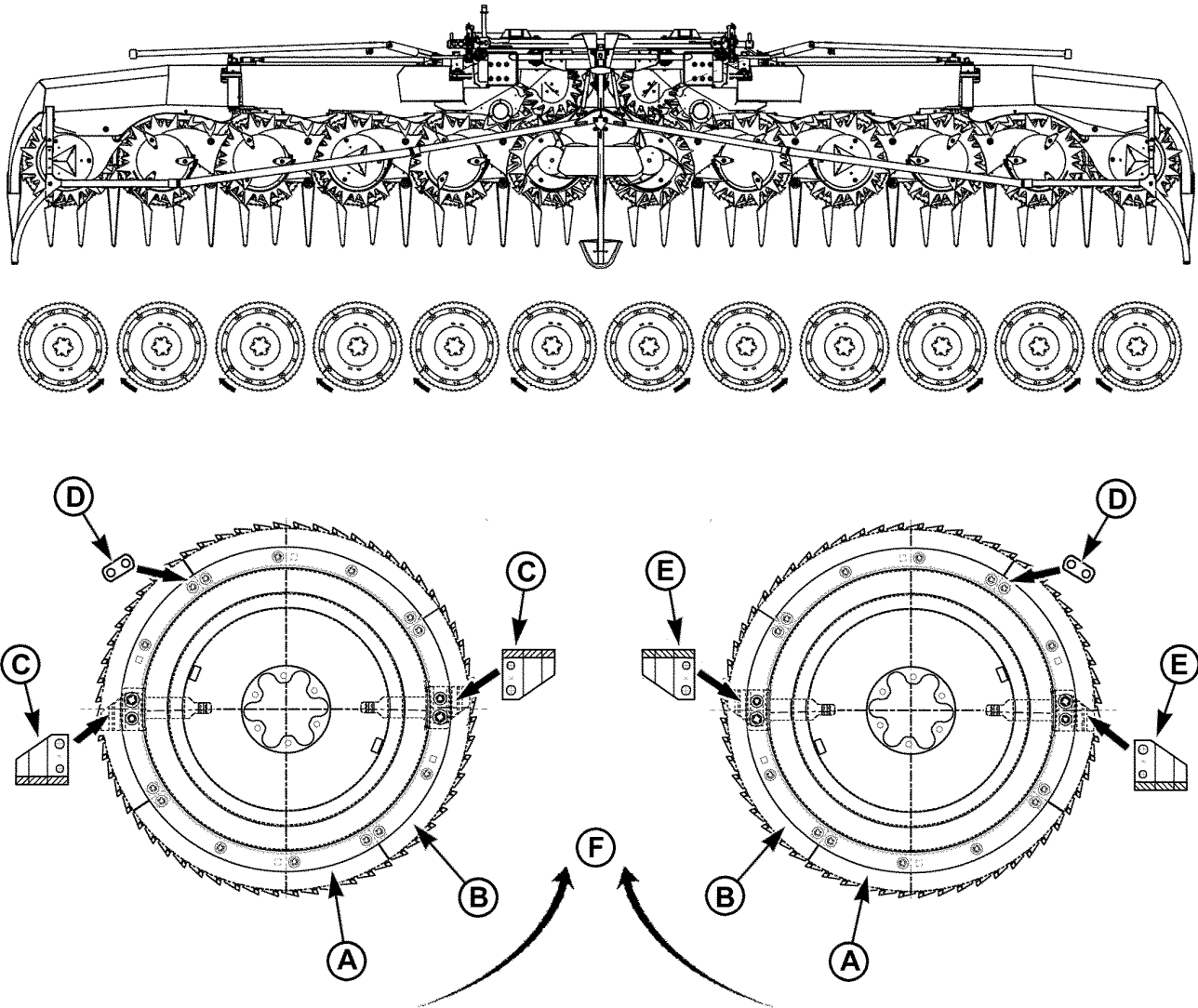
KM00321,000019F -19-10AUG12-1/1

KM1000160 —UN—16OCT07

KM1000161 —UN—16OCT07

KM1000996 —UN—31AUG09

Install New Rotating Blades



KM225015

A—Yellow Blade
B—Black Blade

C—Cleaner (Counter-Clockwise)

D—Strap
E—Cleaner (Clockwise)

F—Direction of Cut

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.

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 blade.
 - 2 yellow blades (A) and
 - 2 black blades (B)

2. The blades are installed in the following order: 1 yellow, 1 black, 1 yellow and 1 black blade.

IMPORTANT: Install blades with the coated side uppermost.

3. Remember to install cleaner (C) or (E) as shown in the installation scheme. Cleaner (C) is for counter-clockwise rotation and cleaner (E) is for clockwise rotation.

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

Continued on next page

KM00321.000035F -19-09DEC14-1/2

KM225015—UN—09DEC14

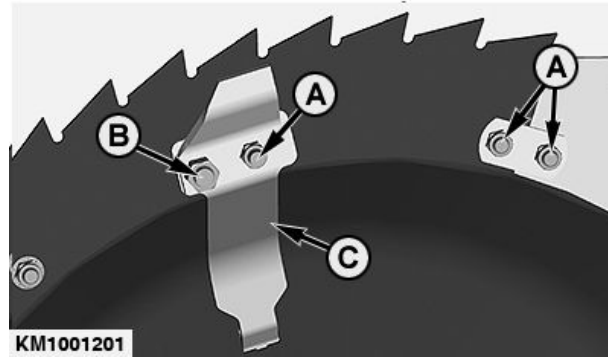
IMPORTANT: Always use reinforcement plate (C) when installing the cleaners.

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

KM00321,000035F -19-09DEC14-2/2

Adjusting Dividers

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

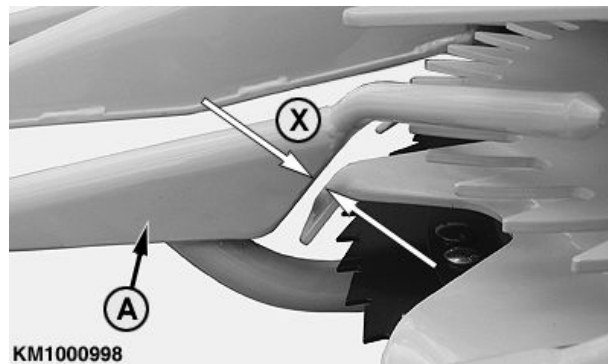
Always keep distance (X) between 1 and 7 mm (0.04 and 0.27 in.).

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

Specification	
Dividers and drums—Distance from each other.....	1 to 7 mm
	0.04 to 0.27 in.

A—Divider

X—1 to 7 mm (0.04 to 0.27 in.)



KM1000998 —UN—01SEP09



KM1000999 —UN—01SEP09

KM00321,000022A -19-01SEP09-1/1

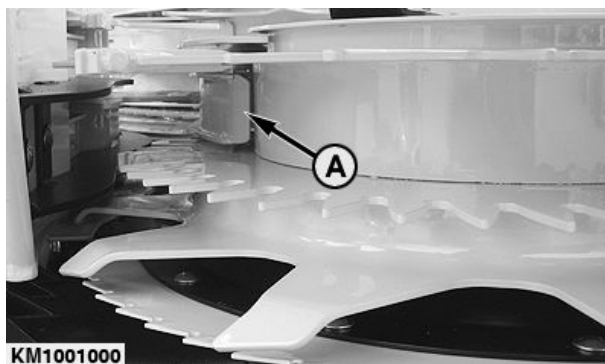
Checking Scraper Adjustment

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

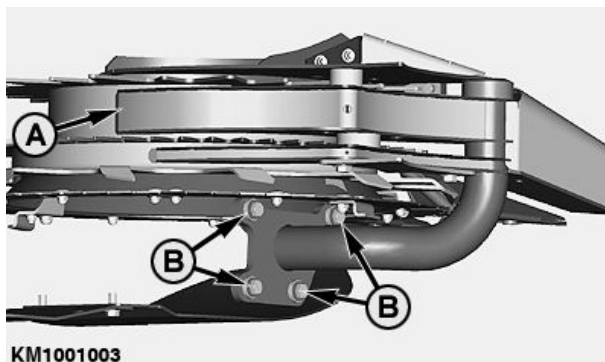
Scraper (A) can be adjusted by means of slot holes (B).

A—Scraper

B—Slot hole



KM1001000



KM1001003

KM00321,000022B -19-01SEP09-1/1

KM1001000 —UN—01SEP09

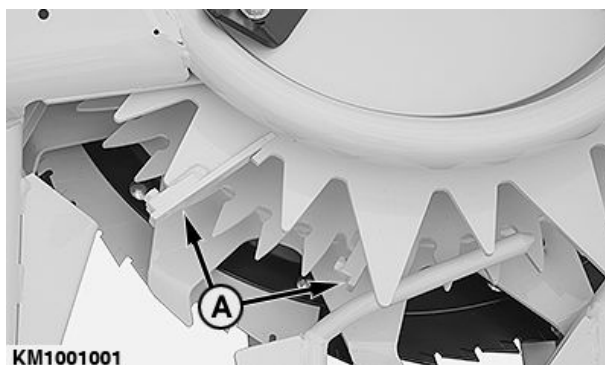
KM1001003 —UN—01SEP09

Checking Cleaners

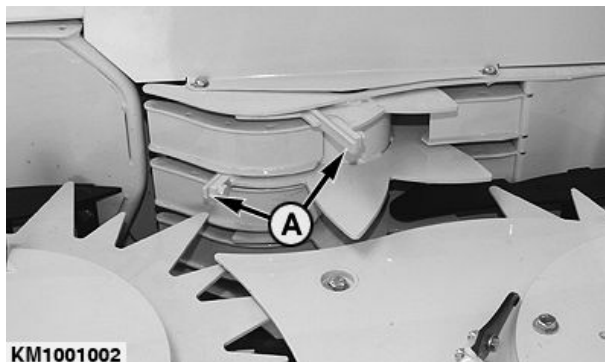
Check condition of the cleaners (A) frequently, replace if necessary.

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

A—Cleaners



KM1001001



KM1001002

KM00321,000022C -19-01SEP09-1/1

KM1001001 —UN—25JUL17

KM1001002 —UN—01SEP09

Adjust the Cleaners on the Feeder House Drums

To prevent stoppages in the intake channel, the distance between cleaner (A) and guide plate (B) must not exceed 0.5 mm. If necessary, adjust cleaners (A) in the direction shown by the arrow.

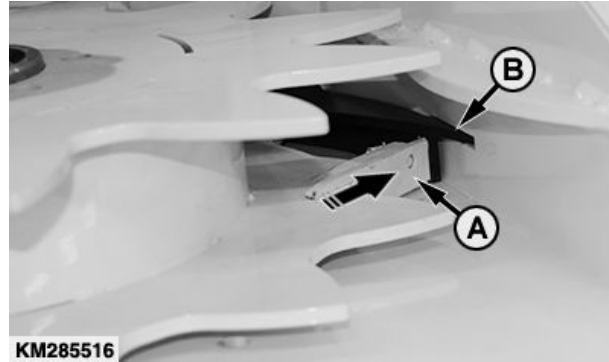
Specification

Cleaners (A) and Guide

Plate (B)—Distance from

Each Other.....	0.5 mm
	0.02 in.

IMPORTANT: Two cleaners must be adjusted on each feeder house drum.



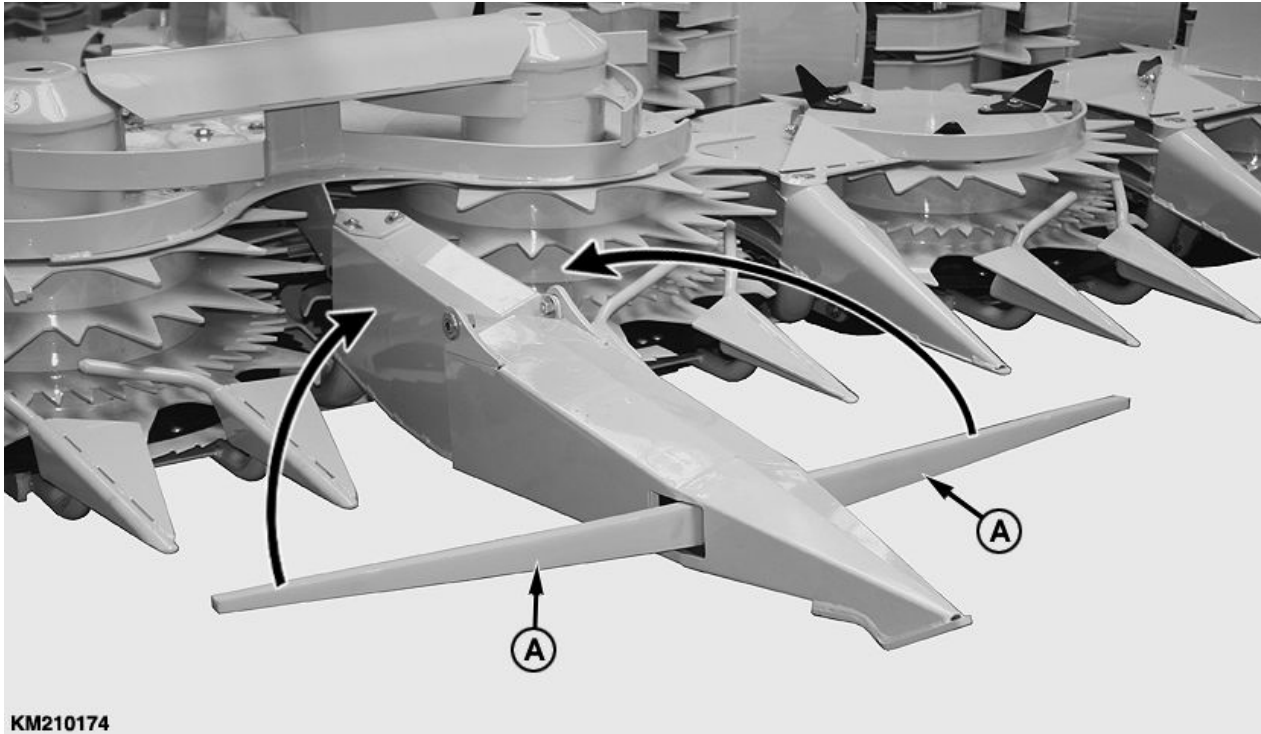
A—Cleaner

B—Guide Plate

KM00321,0000541 -19-14JUN16-1/1

KM285516—UN—21NOV16

Check Steering Sensor Voltage Readings (Rotary Harvesting Units for CLAAS forage harvesters)



KM210174—UN—31MAR14

A—Feeler

The following voltage values must be reached when the feeler (A) is deflected:

- With feeler (A) in straight position: 0,5 volts (+/- 10%)

- With maximum deflection of feeler (A): 4.5 volts (+/- 5%)

KM00321,00002E6 -19-31MAR14-1/1

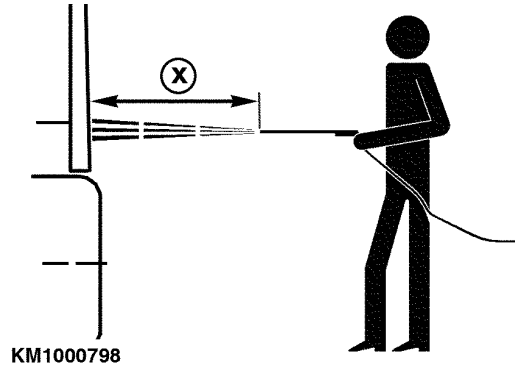
Cleaning Rotary Harvesting Unit

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)



X—250 mm (9.84 in.)

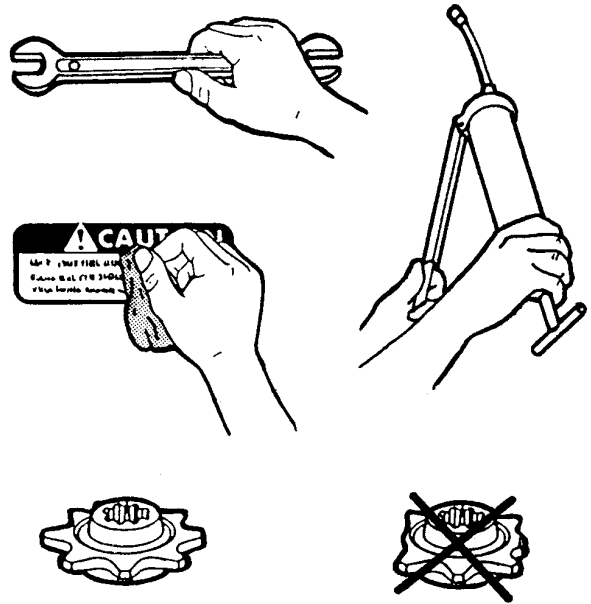
KM1000798 —UN—09MAR09

KM00321,000014A -19-26MAR09-1/1

Storage

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.



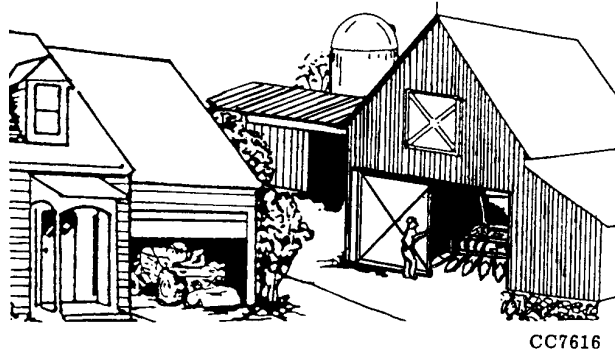
KM1000902

KM1000902 —UN—12JUN09

KM00321,000019E -19-12JUN09-1/1

Removing Harvesting Unit from Storage

- If necessary, give the harvesting unit a thorough clean.
- Lubricate the harvesting unit. See "Lubrication and Maintenance" Section.
- Tighten all screws and make sure they are seated firmly.
- Check all clutches as shown in "Service" Section.
- Carry out all the operations described under "Lubrication and Maintenance".
- Read the Operator's Manual once again.



CC7616

CC7616 —UN—21MAR95

ZX,688RHU010145 -19-01NOV97-1/1

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.

KM00321,00004C9 -19-30NOV15-1/1

345^{plus} Rotary Harvesting Unit

Drive system oil-bath gear box with safety clutch

Harvesting system Cutting system with high-speed rotating blades

Crop conveyor six slowly rotating gathering drums, two cross feed drums, and two oblique feed drums

Weight with basic equipment approx. 2025 kg (4464 lb.)

Width

Transport width 3,00 m (9 ft. 10 in.)^a

Working width 4,50 m (14 ft. 9.2 in.)^a

Overall width 4,50 m (14 ft. 9.2 in.)^a

Height 1,40 m (4 ft. 7.1 in.)^a

Length 1.60 m (5 ft. 3.0 in.)^a

Maximum operating speed 15 km/h (9.32 mph)

^aAll dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.

KM00321,00008B6 -19-26FEB19-1/1

360^{plus} Rotary Harvesting Unit

Drive system oil-bath gear box with safety clutch

Harvesting system Cutting system with high-speed rotating blades

Crop conveyor eight slowly rotating gathering drums, four cross feed drums, and two oblique feed drums

Weight with basic equipment approx. 2400 kg (5291 lb.)

Width

Transport width 3,00 m (9 ft. 10 in.)^a

Working width 6,00 m (19 ft. 8.4 in.)^a

Overall width 6,07 m (19 ft. 11 in.)^a

Height 1,40 m (4 ft. 7.1 in.)^a

Length 1.60 m (5 ft. 3.0 in.)^a

Maximum operating speed 15 km/h (9.32 mph)

^aAll dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.

KM00321,00008B7 -19-26FEB19-1/1

375^{plus} Rotary Harvesting Unit

Drive system oil-bath gear box with safety clutch

Harvesting system Cutting system with high-speed rotating blades

Crop conveyor ten slowly rotating gathering drums, six cross feed drums and two oblique feed drums

Weight with basic equipment approx. 3250 kg (7165 lb.)

Width

Transport width 3,00 m (9 ft. 10 in.)^a

Working width 7,50 m (24 ft. 7.2 in.)^a

Overall width 7,50 m (24 ft. 7.2 in.)^a

Height 1,40 m (4 ft. 7.1 in.)^a

Length 1.60 m (5 ft. 3.0 in.)^a

Maximum operating speed 15 km/h (9.32 mph)

^aAll dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.

KM00321,00008B8 -19-26FEB19-1/1

390^{plus} Rotary Harvesting Unit

Drive system oil-bath gear box with safety clutch

Harvesting system Cutting system with high-speed rotating blades

Crop conveyor twelve slowly rotating gathering drums, eight cross feed drums, and two oblique feed drums

Weight approx. 4100 kg (9039 lb)

Width

Transport width 3,30 m (10 ft. 9.9 in.)^a

Working width 9,00 m (29 ft 6.3 in.)^a

Overall width 9,14 m (29 ft 11.8 in.)^a

Height 1,40 m (4 ft. 7.1 in.)^a

Length 1.60 m (5 ft. 3.0 in.)^a

Maximum operating speed 12 km/h (7.46 mph)

^aAll dimensions are nominal dimensions. Actual dimensions may be subject to fluctuations and may vary from case to case.

KM00321,00008B9 -19-26FEB19-1/1

Sound Level

5131 with rotary harvesting unit attached to the forage harvester and cab closed (average value):

Max. sound level at operator's ear in accordance with DIN ISO 11204. Measurement method in accordance with ISO

390^{plus} 76.1 dB(A)

375^{plus} 76.1 dB(A)

360^{plus} 76.1 dB(A)

345^{plus} 76.1 dB(A)

KM00321,0000542 -19-15JUN16-1/1

EU Declaration of Conformity

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

The person named below declares that

Machine type: Rotary harvesting unit

Models: 345^{plus}, 360^{plus}, 375^{plus} and 390^{plus}

meet all relevant regulations and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Machinery directive	2006/42/EG	Self-certification, per Article 5 of the Directive
Agricultural Machinery Safety—Part 1	DIN EN ISO 4254-1	Self-certification
Agricultural Machinery Safety—Part 7	DIN EN ISO 4254-7	Self certification
Safety of machinery	DIN EN ISO 12100	Self-certification
Universal-jointed shafts and their protection devices	DIN EN 12965	Self certification

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

Brigitte Birk
Mannheim, Germany D-68008

Place of Declaration: 48703 Stadthohn,
Germany

Name: Richard Wübbels

Date of Declaration: 1 March 2020

Title: Manager Product Engineering

Manufacturing unit: Kemper Stadthohn

DXCE01 —UN—28APR09



KM00321,0000B09 -19-05OCT20-1/1

Serial Number

Rotary Harvesting Unit Serial Number Plate

A—Type
B—Model
C—Product Identification
Number

D—Weight
E—Year of Construction
F—Model Year

The diagram shows a serial number plate for a rotary harvesting unit. It is divided into several sections. The top left section contains the text 'Maschinenfabrik KEMPER'. Below this, there are fields for 'Type / Model' (labeled B), 'Identification' (labeled C), and 'Product Identification Number' (labeled C). The bottom left section contains fields for 'Weight' (labeled D) and 'Max. axle load' (labeled D), both with units 'KG'. The top right section contains fields for 'Constr. year' (labeled E) and 'Model year' (labeled F). The bottom right section contains the CE mark and the text 'Maschinenfabrik Kemper GmbH & Co KG 48703 Stadthorn'.

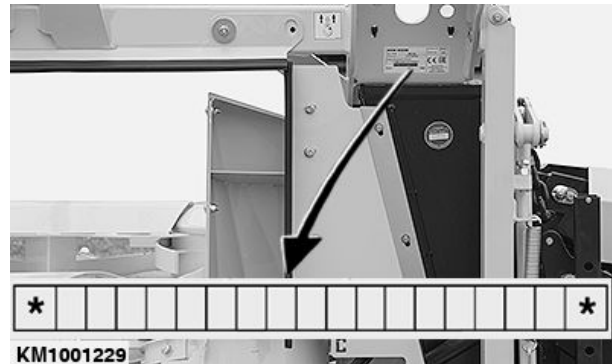
KM1001134

KM1001134 —UN—24FEB10

KM00321,00001A5 -19-10AUG12-1/1

Serial Number

When ordering parts, always quote the rotary harvesting unit serial number. The serial number is on a plate located on the right side of the frame. Record serial number in the space provided opposite.



KM1001229 —UN—25JUL17

KM00321,0000362 -19-19JUL10-1/1

Serial Number

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