

Rotary Harvesting Units

345^{plus}

360^{plus}

375^{plus}

390^{plus}



OPERATOR'S MANUAL

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

OMKM117519 ISSUE A8 (ENGLISH)

Maschinenfabrik Kemper GmbH & Co. KG

**European Edition
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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.



T81388 —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.

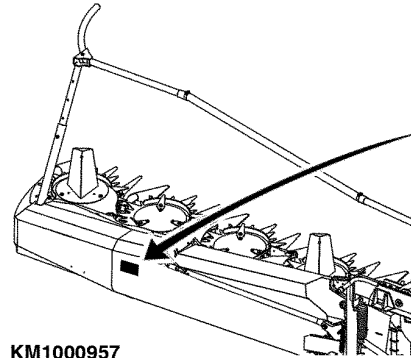


TS187 —19—30SEP88

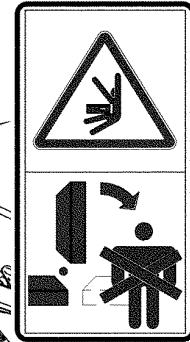
DX,SIGNAL -19-03MAR93-1/1

Folding Area

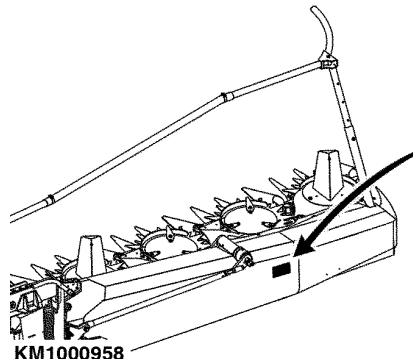
Stay clear of the folding area of the rotary harvesting unit.
 When folding or unfolding the rotary harvesting unit, ensure that no persons are standing within the folding area.
 Before folding or unfolding, ensure that all persons keep the required safety distance from the rotary harvesting unit.



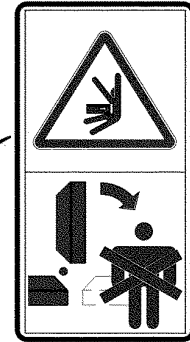
KM1000957



KM1000957 —UN—14AUG09



KM1000958

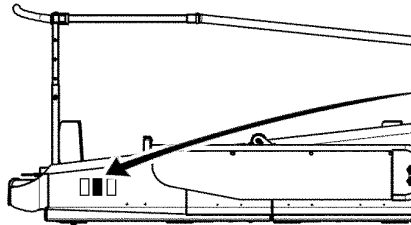


KM1000958 —UN—14AUG09

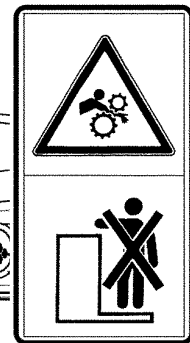
KM00321,00001FE -19-14AUG09-1/1

Rotating Drums

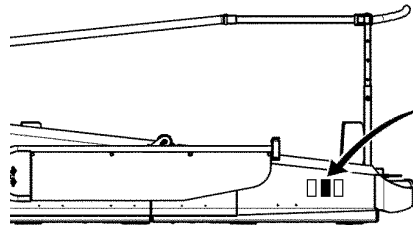
Stay clear of rotating drums to avoid personal injury.
 Arms, legs or loose clothing might become caught by the rotating drums when in operation.
 Always keep the required safety distance from the rotating drums.
 Wait until all moving parts have stopped.



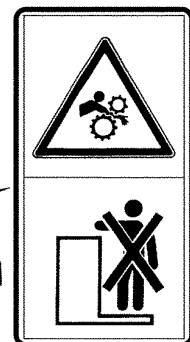
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KM1000959 —UN—14AUG09



KM1000960



KM1000960 —UN—14AUG09

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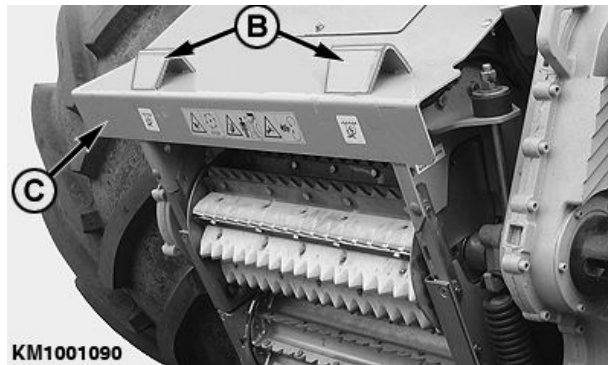
Attaching to a CLAAS Forage Harvester

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.

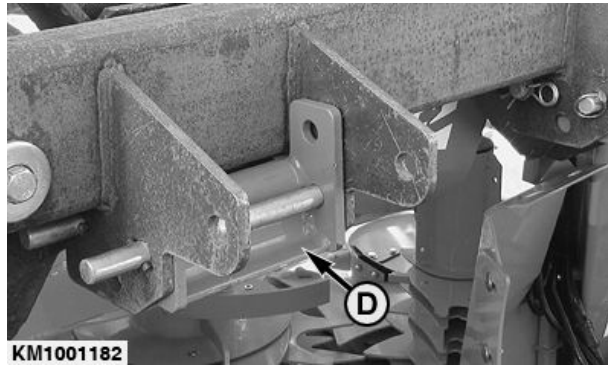
Lift feed roll housing (C) up until attaching straps (B) of the rotary harvesting unit lie in the consoles (D).

B—Attaching Straps
C—Feed Roll Housing

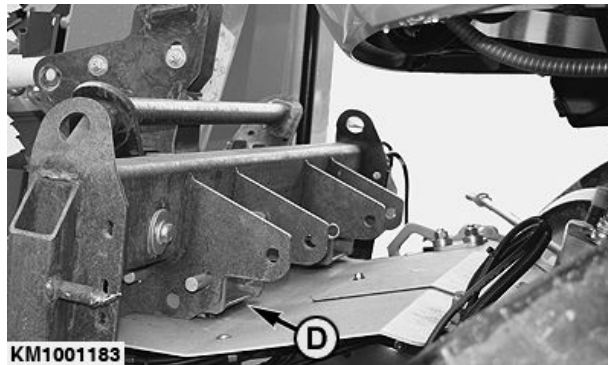
D—Console



KM1001090 —UN—04FEB10



KM1001182 —UN—07APR10

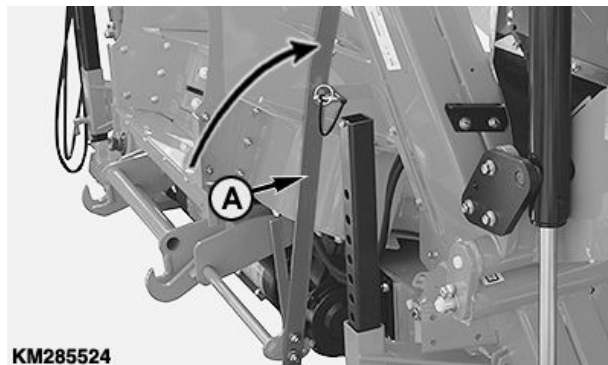


KM1001183 —UN—07APR10

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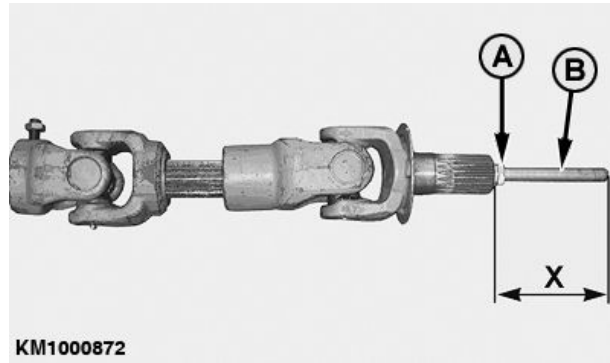
KM00321,0000546 -19-20JUN16-3/5

Attaching to a CLAAS Forage Harvester

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

A—Hex. Nut
B—Threaded Rod

X—225 mm (8.86 in.)



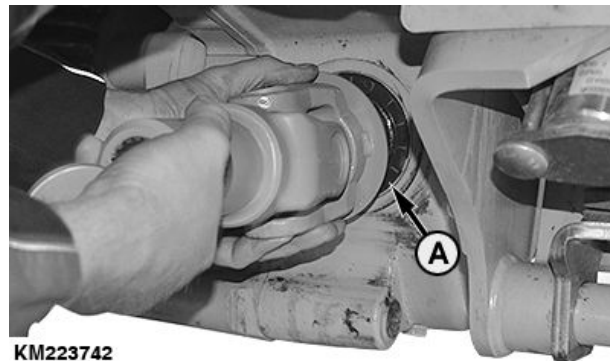
KM1000872 —UN—26MAY09

KM00321.0000340 -19-22OCT14-3/8

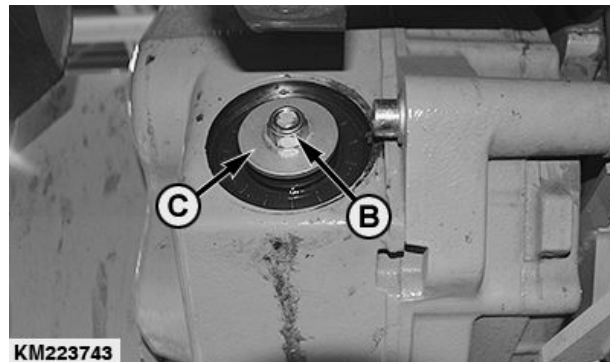
- Insert the u.j. shaft into header drive (A) on the forage harvester.
- Secure the u.j. shaft to the rear of the header drive using washer (C) and lock nut (B).
- Put the other end of the u.j. shaft on the rotary harvesting unit gear box (D).

A—Header Drive
B—Lock Nut

C—Washer
D—Gear Box



KM223742 —UN—22OCT14



KM223743 —UN—22OCT14



KM223744 —UN—22OCT14

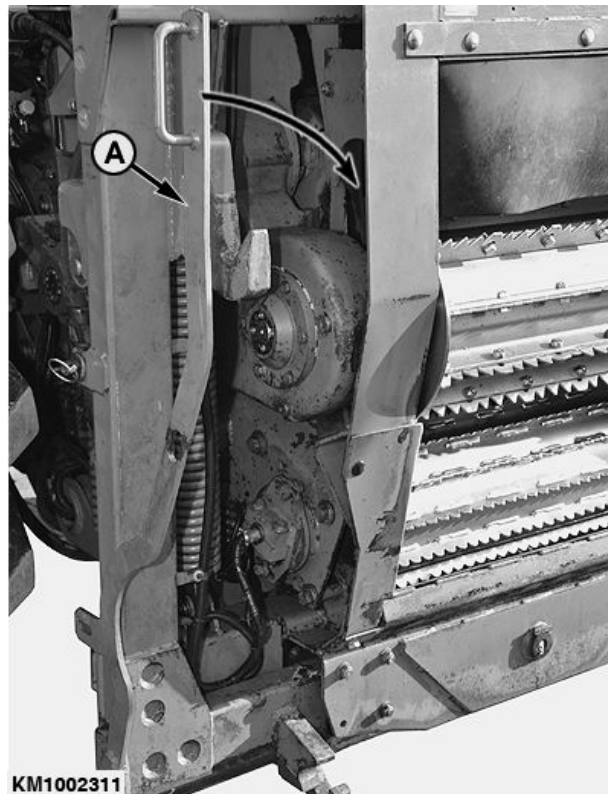
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KM00321.0000340 -19-22OCT14-4/8

**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

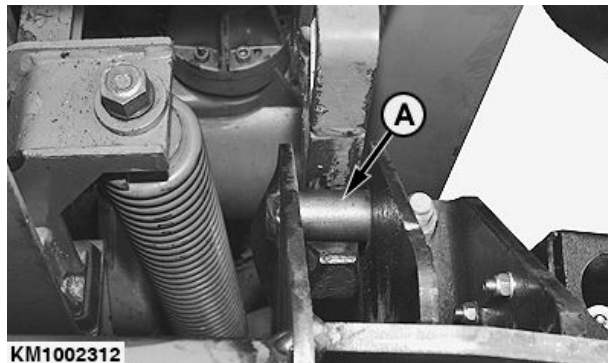
KM00321,000053F -19-14JUN16-1/7

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.

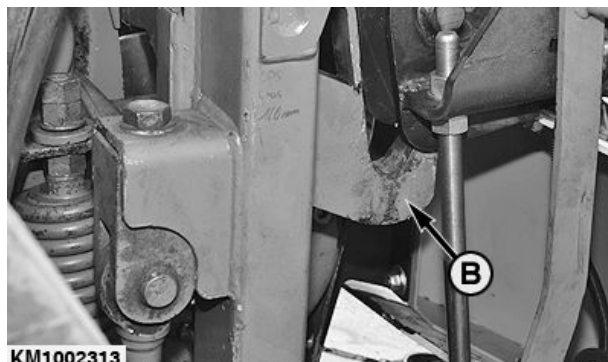
A—Pin

B—Receiver Jaws



KM1002312

KM1002312 —UN—21JUN12



KM1002313

KM1002313 —UN—21JUN12

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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)

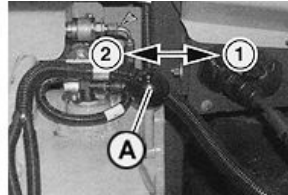
Cutterhead with 28 knives (type 493)

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

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



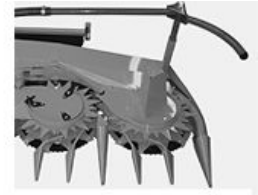
I



II



III



IV

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
2x14 knives	2x7 knives			
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
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

Continued on next page

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

Lengths of Cut and Gear Selection with Multi-Speed Drive 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	-	-	-	-	-

KM00321,000035D -19-08DEC14-1/1

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).

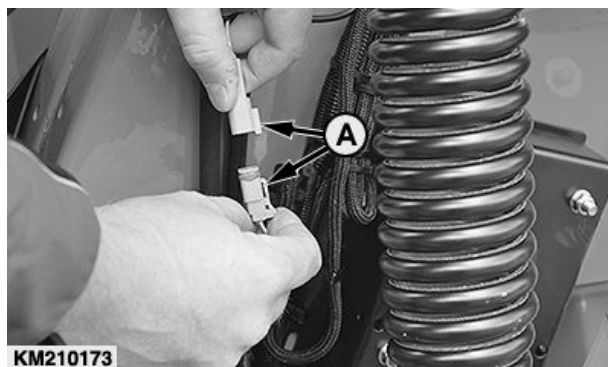
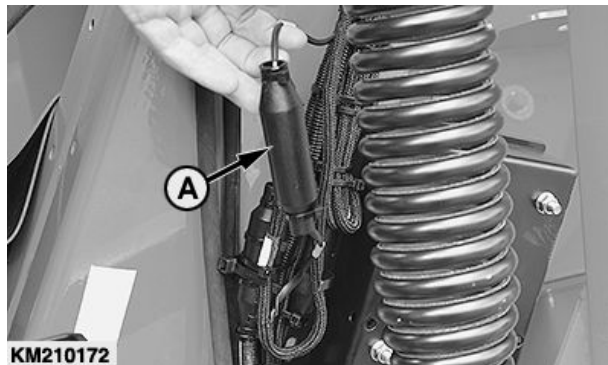
CLAAS forage harvesters, Types 494 and 496:

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

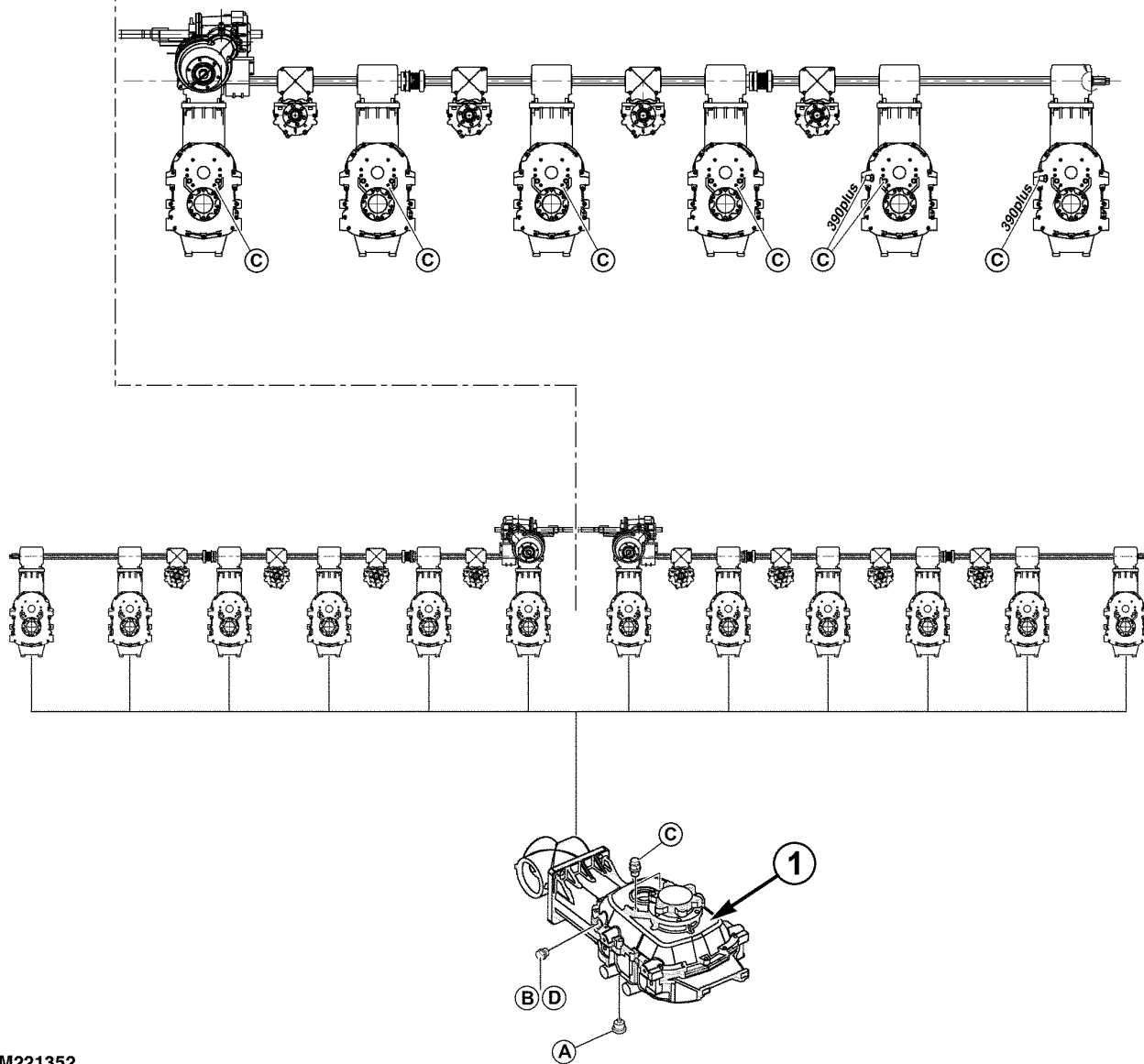


KM210172 —UN—31MAR14

KM210173 —UN—31MAR14

KM00321,000054B -19-21JUN16-1/1

Overview of Transmissions and Oil Levels (Part 2)



KM221352

A—Oil Drain Plug
B—Oil Filler Plug

C—Breather
D—Oil Level Plug
1— Gathering Drums, Spur Gear Angle Drive - 8.5 L (2.25 US. gal.)

Rotary harvesting unit transmissions (gathering drums)

NOTE: Twelve spur gear angle drives (1) for gathering drums are used on 390^{plus}, ten on 375^{plus}, eight on 360^{plus}, and six on 345^{plus} rotary harvesting unit.

IMPORTANT: Make sure that breathers (C) are always installed as shown in the illustration.

Additionally on 390^{plus} only, pay attention that the two outer breathers (C) are installed on the oblique side of the gearbox. This will prevent oil from escaping when folding the rotary harvesting unit.

NOTE: The illustration shows location of breather on left side. Install breather on the right side accordingly (mirror-imaged).

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KM00321,0000360 -19-19DEC14-1/2

KM221352—UN—07OCT14

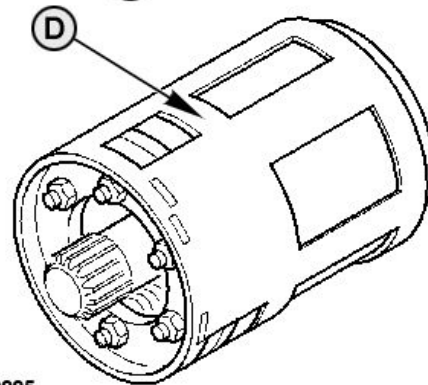
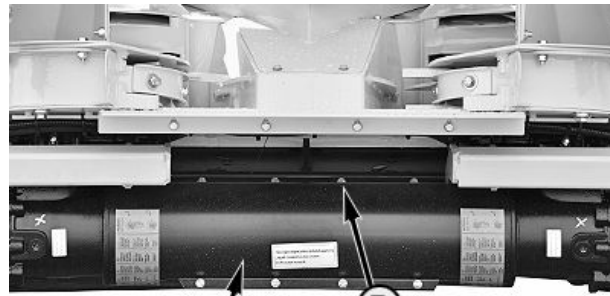
Relieve Pressure on the Main Drive Slip Clutches

- 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

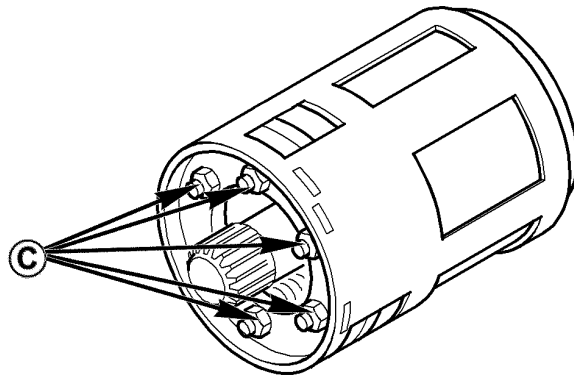
KM00321,0000321 -19-16JUN10-1/2

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.



KM100041 —UN—04APR05

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

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 transmission 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.)
Working width.....	4.50 m (14 ft. 9.2 in.)
Overall width.....	4.50 m (14 ft. 9.2 in.)
Height.....	1.40 m (4 ft. 7.1 in.)
Length.....	1.60 m (5 ft. 3.0 in.)
Maximum operating speed.....	15 km/h (9.32 mph)

KM00321.00001A0 -19-10AUG12-1/1

360^{plus} Rotary Harvesting Unit

Drive system.....	oil-bath transmission 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.)
Working width.....	6.00 m (19 ft. 8.4 in.)
Overall width.....	6.07 m (19 ft. 11 in.)
Height.....	1.40 m (4 ft. 7.1 in.)
Length.....	1.60 m (5 ft. 3.0 in.)
Maximum operating speed.....	15 km/h (9.32 mph)

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