

# **400F Support Wheel**



**OPERATOR'S MANUAL**  
**400F Support Wheel**  
**OMKM113756 ISSUE C8 (ENGLISH)**

**Maschinenfabrik Kemper GmbH & Co. KG**

**European Edition**  
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# Introduction

## Foreword

READ THIS 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 support wheel may be installed and operated only on a rotary harvesting unit. The user must be entitled to drive a forage harvester on public roads. This manual and the safety signs on the machine may also be available in other languages (see your KEMPER dealer to order).

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. Use only correct replacement parts and fasteners. 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.

LOADING AND HAULING of this support wheel 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. Accurately record all the numbers to help in tracing the machine should it be stolen. 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 SUPPORT WHEEL MUST BE USED EXCLUSIVELY to transport 460<sup>plus</sup>, 475 and 475<sup>plus</sup> rotary harvesting units.

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 SUPPORT WHEEL MUST NOT be used to transport rotary harvesting units other than those indicated in this Operator's Manual, or to transport:

- Agricultural implements made by other manufacturers
- Any types of vehicle

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 SUPPORT WHEEL MUST be serviced and repaired ONLY by industrial mechanics, fitters or persons with comparable qualifications. 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. Any arbitrary modifications carried out on this support wheel will relieve the manufacturer of all liability for any resulting damage or injury.

If you are not the first owner of this machine, it is in your interest to contact your local KEMPER dealer to tell him the serial number of this unit. This will help KEMPER to inform you of relevant issues or product improvements.

KM00321,0000419 -19-07APR15-1/1

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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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# Predelivery Inspection

## Checklist before Using for First Time

Before using the support wheel for the first time, check the following:

- ☐ Check the entire machine for loose or missing nuts and screws.
- ☐ Before attaching the support wheel for the first time, adjust the position of the locking device.
- ☐ Advise the customer of the proper weights and fluids that must be used in the tires, depending upon forage harvester.
- ☐ Check if all safety shields are in place and fastened securely.
- ☐ Check for broken or damaged parts.
- ☐ Review the entire operator's manual with the customer and stress the importance of proper and regular lubrication and safety precautions.

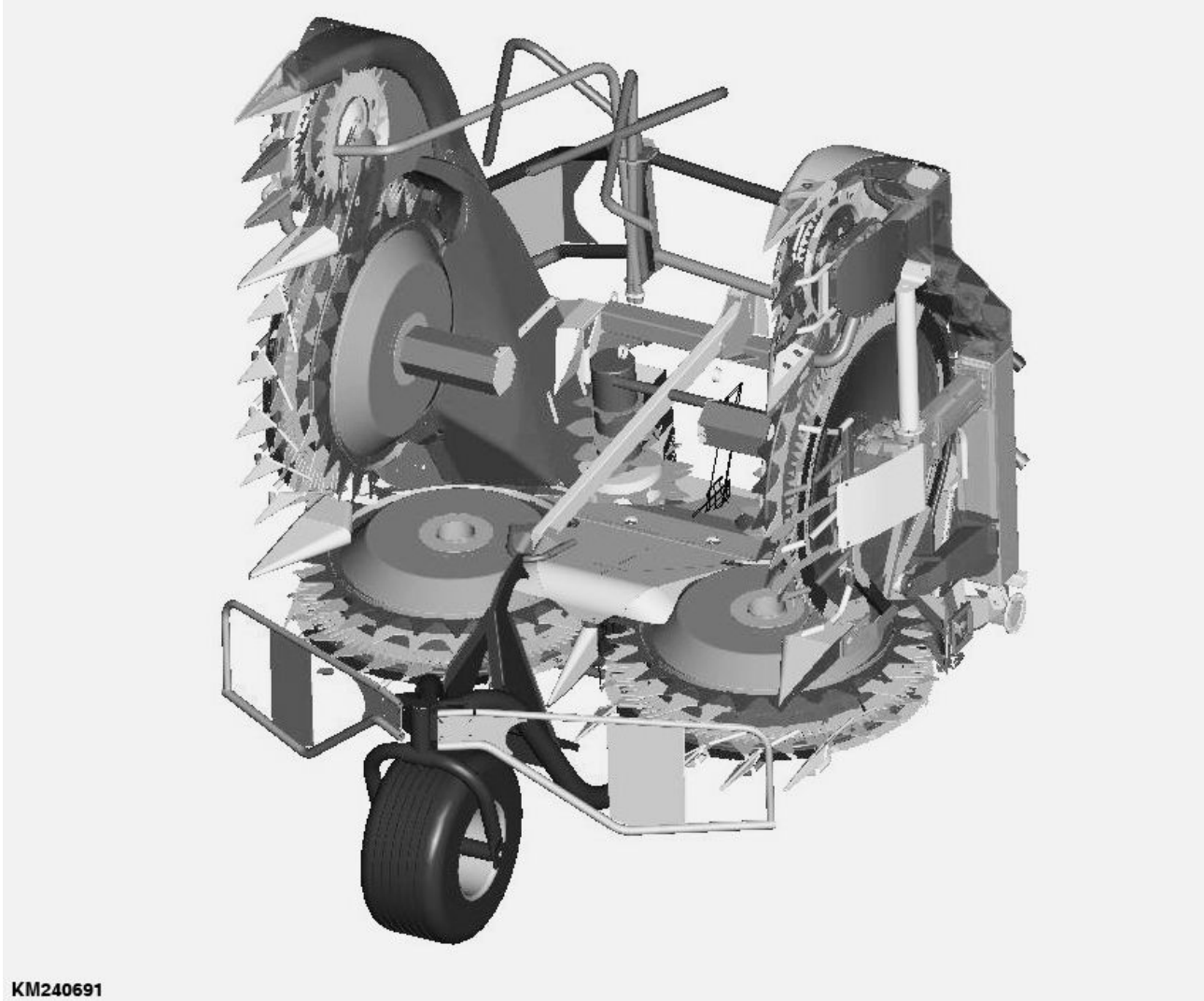
\_\_\_\_\_  
(Signature of Technician)

\_\_\_\_\_  
(Signature of Customer)

KM00321,0000418 -19-31MAR15-1/1

## Identification View

### Identification View



KM240691

KM240691 —UN—07APR15

KM00321,000041A -19-07APR15-1/1

# 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.



DX,ALERT -19-29SEP98-1/1

TS1389 —UN—28JUN13

## 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.



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

TS201 —UN—15APR13

## 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.

**⚠ DANGER**

**⚠ WARNING**

**⚠ CAUTION**

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

TS187 —19—30SEP88

## Check Machine Safety

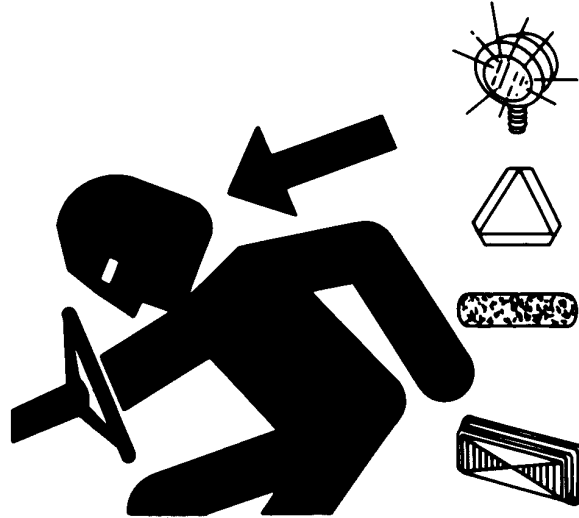
Always check the road and general operating safety of the machine before using.

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

## 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.

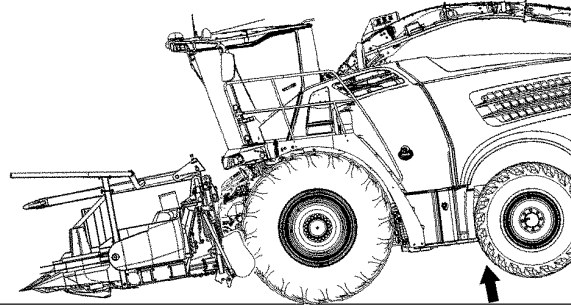


TS951—UN—12APR90

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

## Ballasting for Safe Ground Contact

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



KM232862

KM232862—UN—10FEB15

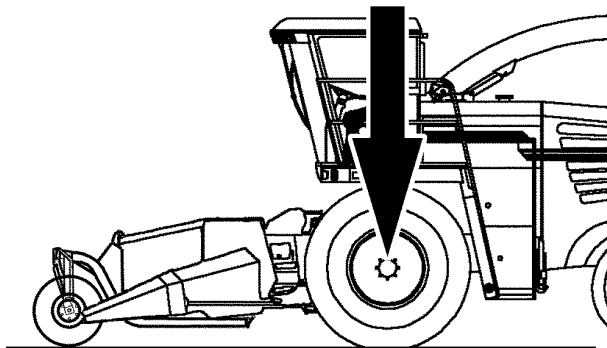
KM00321,00003CB -19-12MAR15-1/1

## Observe Maximum Permissible Front Axle Load

Transport of 475 und 475<sup>plus</sup> rotary harvesting units on public roads with 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 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

KM00321,0000414 -19-30MAR15-1/1



### Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.



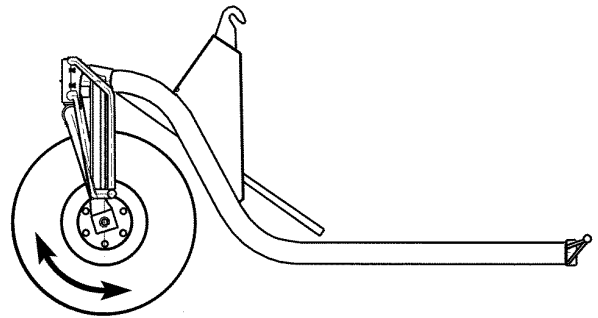
H28930 —UN—30JUN89

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

### Prevent Machine Runaway

Avoid possible injury or death from machine runaway.

Do not park machine on a slope; otherwise take precautions to prevent it from rolling away.



KM1000916

KM1000916 —UN—29JUL09

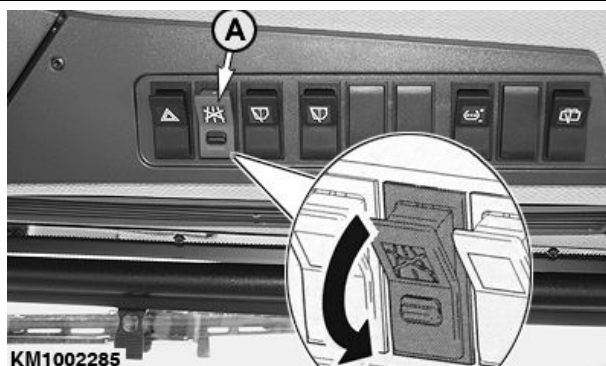
KM00321,00001C3 -19-29JUL09-1/1

## Switch for Road/Field Mode

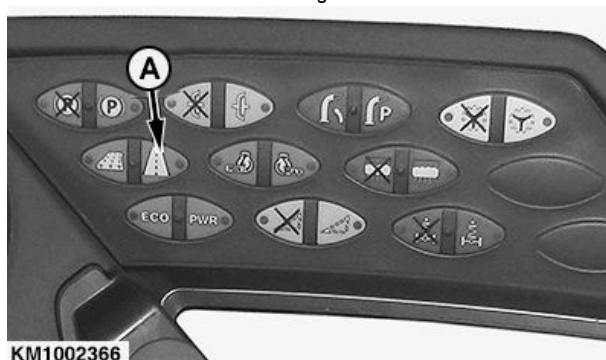
When driving on roads, the switch for road/field mode (A) must be in the position for road travel.

This ensures that all the hydraulic functions with the exception of the steering and the return to pressure are switched off.

A—Switch for Road/Field Mode



*Claas Forage Harvesters*



*Fendt Forage Harvesters*

KM00321,000021D -19-01OCT13-1/1

KM1002285 —UN—27FEB18

KM1002366 —UN—26SEP13

## Danger of Falling

Do not climb the machine.

Riders may be subject to serious injury or death!



KM1000917

KM00321,00001C5 -19-29JUL09-1/1

KM1000917 —UN—29JUL09

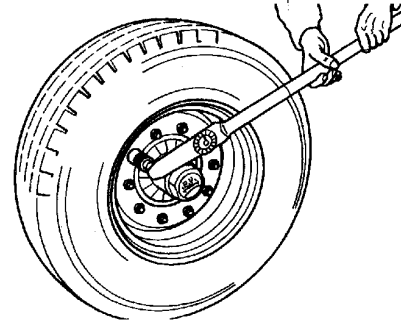
## Retighten Wheel Nuts

Retighten wheel nuts as specified in Sections Wheels and Lubrication and Maintenance.

Failure to do this could result in a wheel falling off during operation, causing serious personal injury and machine damage.

### Specification

Wheel nuts—Torque..... 350 Nm (258 lb-ft)



KM1000918

KM00321,00001C6 -19-11AUG09-1/1

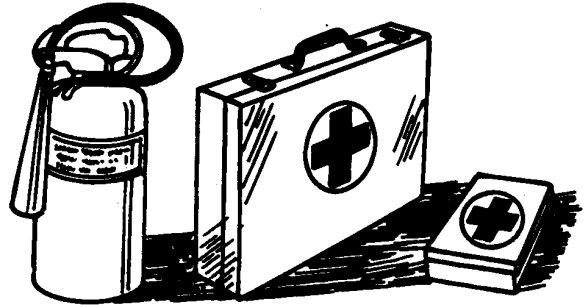
KM1000918 —UN—29JUL09

## 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.



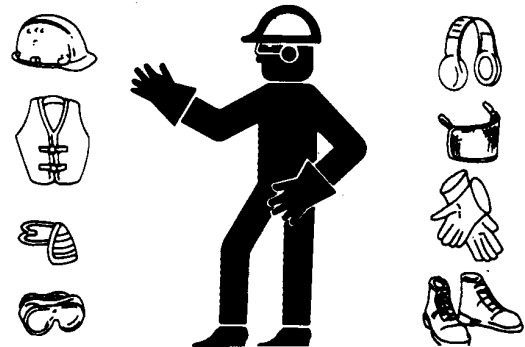
DX,FIRE2 -19-03MAR93-1/1

TS291 —UN—15APR13

## Wear Protective Clothing

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

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



DX,WEAR2 -19-03MAR93-1/1

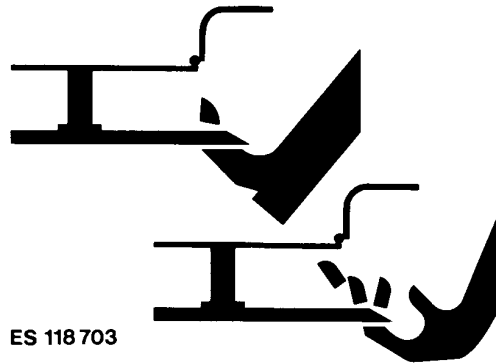
TS206 —UN—15APR13

## 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

## 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

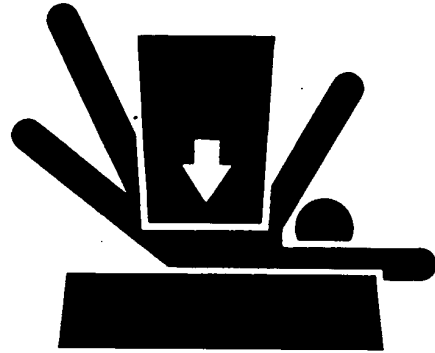
DX,SERV -19-17FEB99-1/1

### 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.



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

TS229 —UN—23AUG88

### Remove Paint Before Welding or Heating

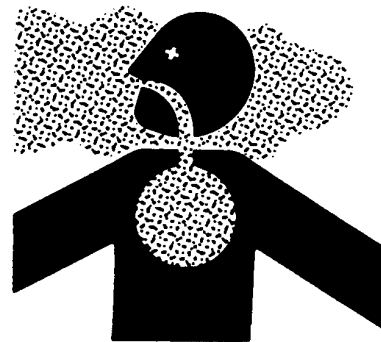
Avoid potentially toxic fumes and dust.

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

# 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. Use this operator's manual for correct safety sign placement.

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

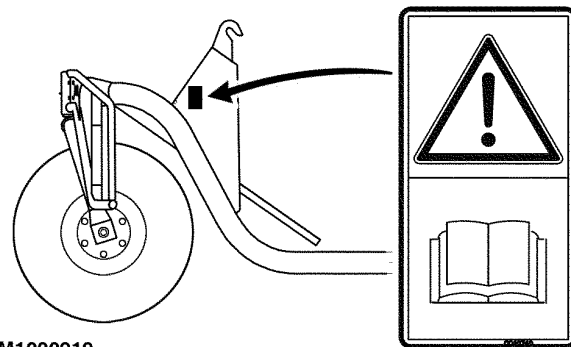


TS201 —UN—15APR13

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

## Operator's Manual

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



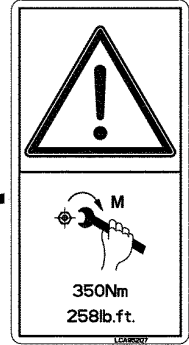
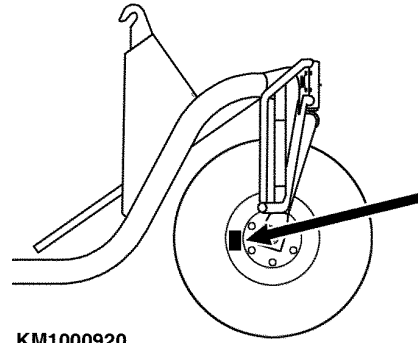
KM1000919

KM1000919 —UN—29JUL09

KM00321,00001C8 -19-29JUL09-1/1

## Front Wheel Attaching Nuts

Retighten wheel attaching nuts at specified intervals.

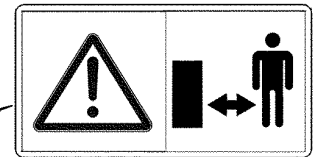
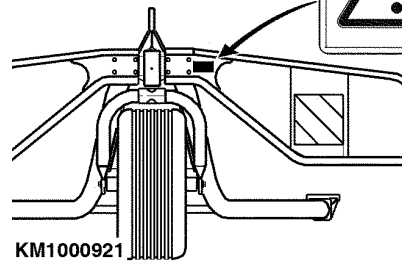


KM1000920 —UN—28SEP12

KM00321,00001C9 -19-12AUG09-1/1

## Support Wheel

Observe an adequate distance to support wheel.



KM1000921 —UN—29JUL09

KM00321,00001CA -19-29JUL09-1/1

# Attaching

## Ballasting the Forage Harvester

Depending on the configuration of forage harvester/rotary harvesting unit, there may be considerable variations in ballast requirements with the support wheel attached.

Always install sufficient ballast to ensure steering function when braking while machine is in operation.

**IMPORTANT: Keep adding additional weights until the weight on the front axle of the forage harvester (with support wheel attached) is no more than 11500 kg (25353 lb.) maximum.**



KM240692 —UN—07APR15

KM00321,000041C -19-08APR15-1/1

## Prior to Attaching

Operation of the support wheel requires identification by the forage harvester software so that the return to pressure hydraulic system may be controlled when in road mode.

The impulse for support wheel identification is triggered as soon as the electrical wiring harness of the rotary harvesting unit is connected to the power outlet of the forage harvester.

KM00321,0000180 -19-16MAY12-1/1

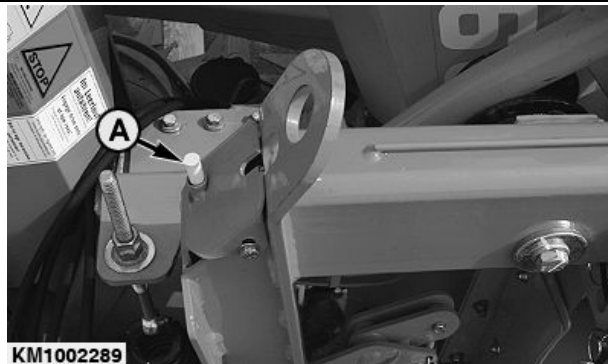
## Automatic Support Wheel Identification

With support wheel attached and completely locked, rod (A) extends on both sides of the attaching frame and transmits an impulse to the forage harvester software via an electrical sensor.

In this way, the support wheel is identified by the forage harvester.

**IMPORTANT: For support wheel operation, the electrical wiring harness must always be connected to the forage harvester.**

A—Rod



KM1002289 —UN—21MAY12

KM00321,000016A -19-23MAY12-1/1

## Attaching to a Rotary Harvesting Unit with AHC (Option)

Before attaching support wheel to a rotary harvesting unit with AHC (option), move rotary harvesting unit to horizontal position.

KM00321,0000220 -19-04OCT13-1/1



## Unfold the Rotary Harvesting Unit



KM239222

A—Locking Pawl

Fold out the rotary harvesting unit until locking pawls (A) are opened at both sides.

**NOTE:** Locking pawls (A) are opened and closed by the folding mechanism of the rotary harvesting unit.

*Rotary harvesting unit folded up: locking pawls (A) closed*

*Rotary harvesting unit folded out: locking pawls (A) opened*

KM00321,0000400 -19-25MAR15-1/1

## Attach Support Wheel

**NOTE:** If rotary harvesting unit cannot be unfolded as described above due to lack of space, support wheel must be transported to a location where it can be attached.

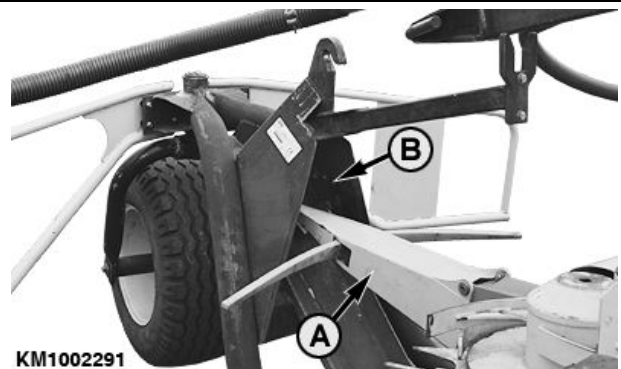
Engage central point (A) of rotary harvesting unit into opening (B) in support wheel.

Insert feed bar (C) into hook (D) on the support wheel.

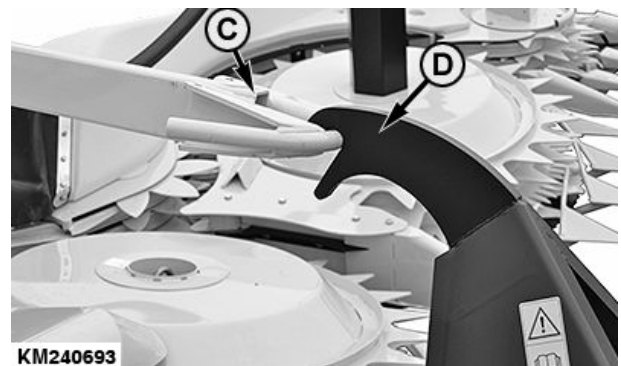
Lift rotary harvesting unit with support wheel.

A—Central Point  
B—Opening

C—Feed Bar  
D—Hook



KM1002291



KM240693

KM00321,000041D -19-08APR15-1/1

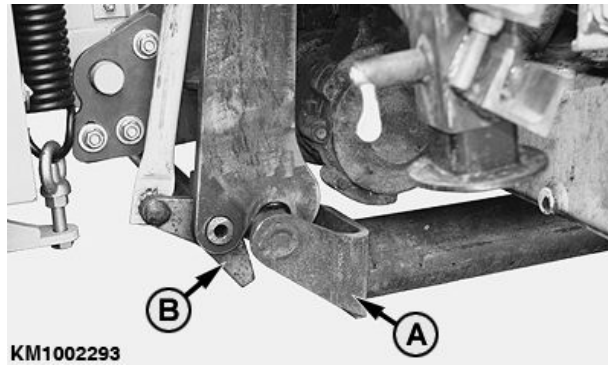
## Locking Device Position

**CAUTION:** Before lifting the rotary harvesting unit, make sure that locking device (A) is lying in locking pawl (B).

**NOTE:** Repeat attaching procedure until locking device is in the correct position.

A—Locking Device

B—Locking Pawl



KM1002293 —UN—15MAY12

KM00321,000016E -19-09MAY12-1/1

## Adjust Locking Device (Only for Initial Use)

When attaching the support wheel for the first time, the position of the locking device must be adjusted.

### Correct locking device position:

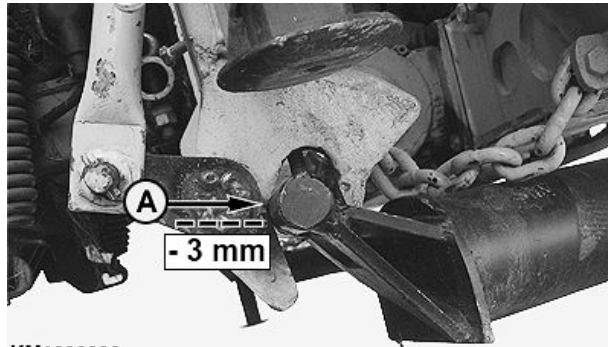
Between the top position of the open locking pawl (A) and approx. 3 mm below the top position.

### Adjustment procedure:

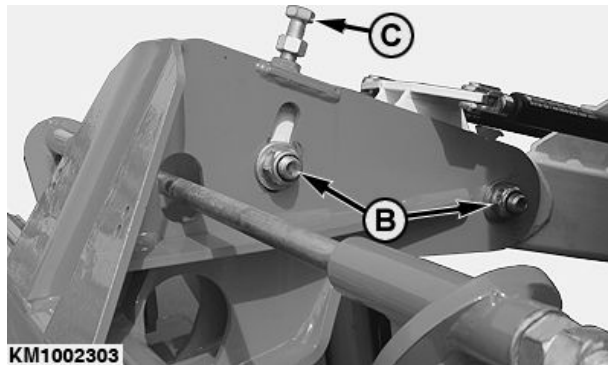
- Lift rotary harvesting unit.
- Remove screws (B).
- Adjust height of support wheel using set screw (C) until locking device is in the position described above.
- Retighten screws (B).

A—Locking Pawl  
B—Screws

C—Set Screw



KM1000930



KM1002303

KM1000930 —UN—30JUL09

KM1002303 —UN—21MAY12

KM00321,000016F -19-21MAY12-1/1

## Lock Support Wheel

**NOTE:** The locking mechanism is controlled by the hydraulic folding function of the rotary harvesting unit.

1. When locking device is centered in locking pawl as shown, lift rotary harvesting unit.



KM239224

KM239224 —UN—25MAR15

Continued on next page

KM00321,0000402 -19-25MAR15-1/3

2. Fold the rotary harvesting unit in.



KM239225

KM239225 —UN—25MAR15

KM00321,0000402 -19-25MAR15-2/3

3. Folding of the rotary harvesting unit will lock the support wheel automatically.



KM239226

KM239226 —UN—16AUG17

KM00321,0000402 -19-25MAR15-3/3

## Locking Status Indicator

*NOTE: The extension of rod (A) indicates whether locking device is properly engaged.*

- Rod (A) extended (as shown) = support wheel locked
- Rod (A) retracted = support wheel NOT locked

**A—Rod**



KM1002289

KM1002289 —UN—21MAY12

KM00321,0000171 -19-09MAY12-1/1

# Detaching

## Detach Support Wheel

1. Lift rotary harvesting unit.
2. Unfold the outer folding sections until the locking device is disengaged (as shown).



KM239228 —UN—26MAR15

KM00321,0000404 -19-26MAR15-1/2

3. Lower rotary harvesting unit until feed bar disengages from hook of support wheel (see illustration).
4. Park support wheel and drive forage harvester backwards.

**⚠ CAUTION: Always park support wheel on a level surface so that it may be reattached later.**

**Do not park support wheel on a slope; otherwise take precautions to prevent it from rolling away.**



KM239229 —UN—26MAR15

KM00321,0000404 -19-26MAR15-2/2

# Support Wheel Operation

## Observe Maximum Permissible Front Axle Load

Compliance with the maximum permissible front axle load of the forage harvester can be achieved by attaching support wheel before transporting the 475 and 475<sup>plus</sup> rotary harvesting units. This ensures that 475 and 475<sup>plus</sup> rotary harvesting units can be transported by forage harvesters on public roads.

**CAUTION:** Transport of 475 and 475<sup>plus</sup> rotary harvesting units on public roads with forage harvesters is only permissible if the maximum front axle load of 11500 kg (25353 lb.) is observed.

KM00321,000041E -19-08APR15-1/1

## Driving on Roads (Claas Forage Harvesters)

1. The switch (A) for driving on the road is located in the control panel of the cab roof.

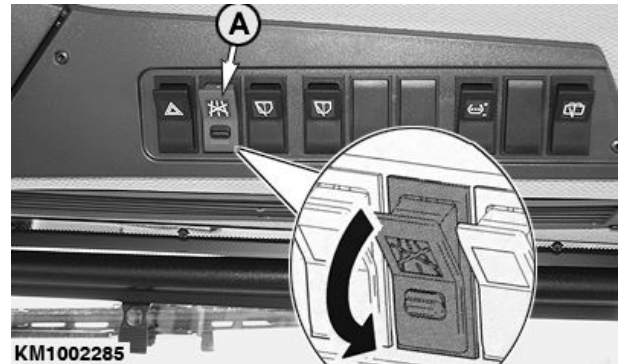
By operating the switch (A), the necessary functions for driving on roads get released.

### Put the switch (A) to driving on roads:

For driving on roads, operate the switch (A) in the direction of the arrow.

**NOTE:** For driving on roads, functions not permitted are blocked.

**A—Safety Switch**



KM1002285 —UN—27FEB18

Continued on next page

KM00321,0000794 -19-02MAR18-1/4

- For driving on roads, lower the support wheel slightly on the ground.

Press the left side of multi-function lever (D) to lower the rotary harvesting unit, which activates the vibration dampening function.

Icon (B) indicates whether vibration dampening is active.

**CAUTION:** If vibration dampening is not activated, error message (C) appears: "Maximum travel speed is restricted! Activate the vibration dampening function."

If error message (C) appears:

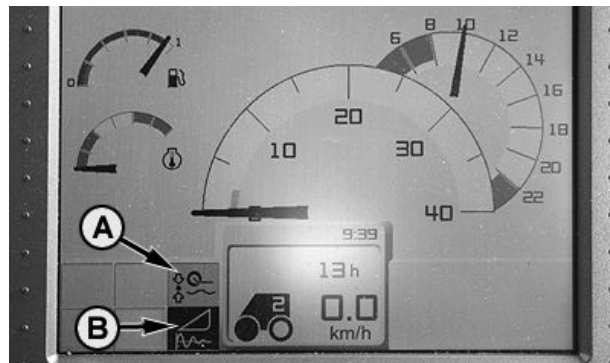
- Press the left side of multi-function lever (D) again to lower the rotary harvesting unit, which activates the vibration dampening function.

When the support wheel is installed correctly, the support wheel identification icon (A) lights up.

- If the icon for support wheel identification (A) lights up red: Support wheel identified, ready for speeds up to 20 km/h.
- If the icon for support wheel identification lights up green: Support wheel identified, ready for speeds up to 40 km/h.

A—Icon for Support Wheel Identification  
B—Icon for Vibration Dampening

C—Error Message  
D—Multi-function lever



KM00321,0000794 -19-02MAR18-2/4

### Error message when folding the rotary harvesting unit

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

"Signal "Corn Head in Operating Position" is incorrect. Danger of Header Colliding with Cab! Fold Header at Own Risk!"

- Press the [esc] button twice to cancel the error message (A).

**NOTE:** Error message (A) is for Orbis equipment, and is intended to prevent damage to the forage harvester's cab caused by the sandwich-style (over-and-under) folding of the Orbis unit. KEMPER rotary harvesting units do not have sandwich-style folding.



A—Error Message

Continued on next page

KM00321,0000794 -19-02MAR18-3/4

### Attaching protective curtains

Before driving on the road, attach protective curtains (A) on both sides and fix them with rubber ropes.

Support wheel is now ready for operation.

A—Protective curtains



KM239239 —UN—27MAR15

KM00321,0000794 -19-02MAR18-4/4

### Driving on Roads (Fendt Forage Harvesters)

Before driving on roads, press button (A). This activates the road mode.

*NOTE: In road mode, maximum speed is enabled and most hydraulic and automatic functions are locked out.*

A—Button



KM1002366 —UN—26SEP13

KM00321,0000421 -19-08APR15-1/8

### Check support wheel identification

1. Press button (A).

A—Button



KM1002367 —UN—26SEP13

Continued on next page

KM00321,0000421 -19-08APR15-2/8

- Press softkey (B) to access the diagnostic mode.

**B—Softkey**



KM1002368—UN—26SEP13

KM00321,0000421 -19-08APR15-3/8

- Confirm the procedure by pressing softkey (C).

**C—Softkey**



KM1002369—UN—04OCT13

KM00321,0000421 -19-08APR15-4/8

- Press softkey (D).

**D—Softkey**



KM1002370—UN—30SEP13

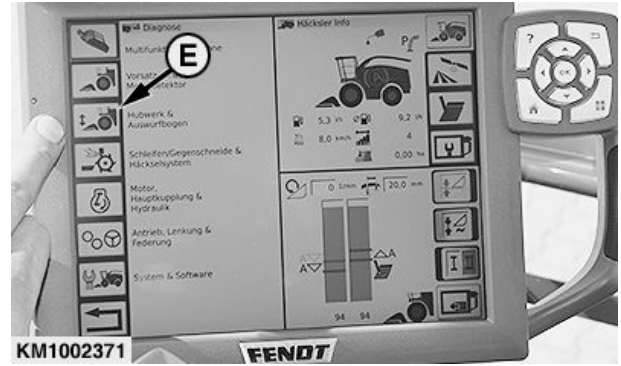
Continued on next page

KM00321,0000421 -19-08APR15-5/8



5. Press softkey (E).

E—Softkey



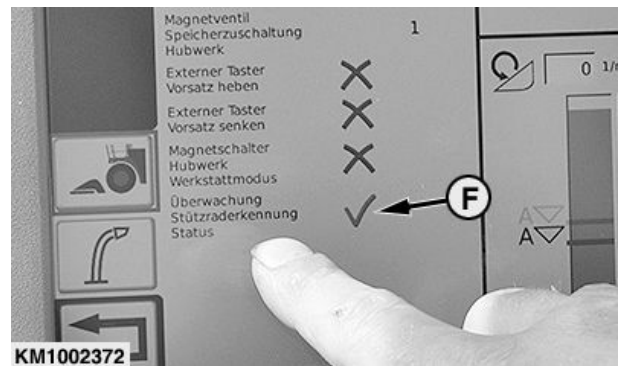
KM1002371 —UN—30SEP13

KM00321,0000421 -19-08APR15-6/8

6. Check whether the support wheel has been recognized by the harvester's software.

**IMPORTANT: Message (F) must be accompanied by a tick (check mark).**

F—Message



KM1002372 —UN—30SEP13

KM00321,0000421 -19-08APR15-7/8

7. Install curtains (A) on both sides, and use rubber straps to secure them.

Support wheel is now ready for operation.

A—Curtains



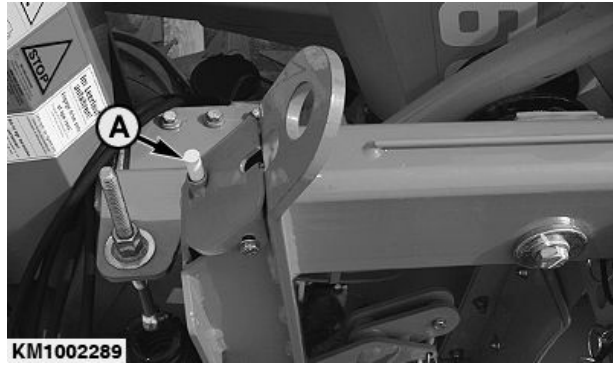
KM239239 —UN—27MAR15

KM00321,0000421 -19-08APR15-8/8

## Locking Status Indicator

**IMPORTANT:** Before every road journey, make sure that the support wheel is locked and that rods (A) are extended at both sides.

A—Rod



KM00321,0000183 -19-22MAY12-1/1

# Additional Weights

## Additional Weights (Ballasting)

Depending on the configuration of forage harvester/rotary harvesting unit, there may be considerable variations in ballast requirements with the support wheel attached.

**IMPORTANT: Add enough weights to keep four-wheel drive efficiency and steering function when braking.**

**Do not overload rear tires, especially when rotary harvesting unit is removed.**

**Keep adding additional weights until the weight on the front axle of the forage harvester (with support wheel attached) is no more than 11500 kg (25353 lb.) maximum.**

*NOTE: For detailed information on how to install ballast, see Operator's Manual of the forage harvester.*



KM240692 —UN—07APR15

KM00321,000041F -19-08APR15-1/1

## Ballasting chart (CLAAS forage harvesters)

Rotary harvesting unit model	Forage harvester model	Number of weight plates at the rear	Comfort support wheel 400F
475 <sup>plus</sup>	Jaguar 860-870 Type 496 <sup>a</sup>	5 Rear axle load minimum 6110 kg (13470 lb)	installed
	Jaguar 930-940 Type 497 <sup>a</sup>	4 Rear axle load minimum 6640 kg (14638 lb)	installed
	Jaguar 950-960 Type 497 <sup>b</sup>	4 Rear axle load minimum 6670 kg (14705 lb)	installed
	Jaguar 970 Type 497 <sup>a</sup>	3 Rear axle load minimum 7180 kg (15830 lb)	installed
	Jaguar 980 Type 497 <sup>b</sup>	3 Rear axle load minimum 7620 kg (16800 lb)	installed
	Jaguar 930-940 Type 498 <sup>b</sup>	4 Rear axle load minimum 6850 kg (15100 lb)	installed
	Jaguar 950-960 Type 498 <sup>b</sup>	3 Rear axle load minimum 6660 kg (14683 lb)	installed
	Jaguar 970 Type 498 <sup>b</sup>	3 Rear axle load minimum 7170 kg (15807 lb)	installed
	Jaguar 980 Type 498 <sup>b</sup>	3 Rear axle load minimum 7350 kg (16204 lb)	installed

*Ballasting Chart—Road Transport*

<sup>a</sup>Forage harvester with motors of emissions level 3B (TIER 4 interim)

<sup>b</sup>Forage harvester with motors of emissions level 4 (TIER 4 final)

**NOTE: Weight of one plate = 170 kg (375 lb)**

The number of weight plates is an example and is applicable to forage harvester with cracker installed and four-wheel drive. The ballasting has to be adjusted depending on the equipment and tires.

**IMPORTANT: Do not overload rear tires, especially when rotary harvesting unit is removed.**

**For driving on public roads without the rotary harvesting unit remove the ballast weights.**

KM00321,0000795 -19-02MAR18-1/1

# Wheels

## Service Tires Safely

**⚠ CAUTION:** Explosive separation of a tire and rim parts can cause serious injury or death.

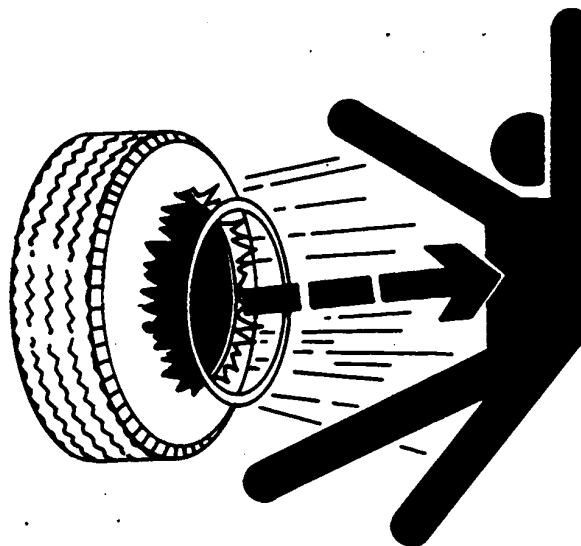
**Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.**

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure.

Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



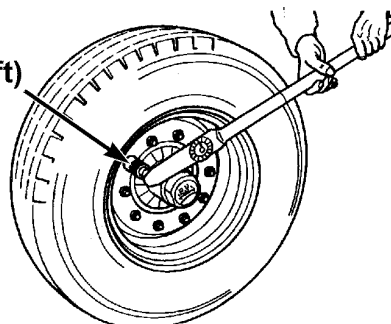
TS211 —UN—15APR13

DX,RIM1 -19-27OCT08-1/1

## Wheel Bolts and Nuts

After the first hour of operation and then every 50 hours of operation, tighten wheel nuts to 350 Nm (258 lb-ft).

**350 Nm  
(258 lb-ft)**



KM1000943

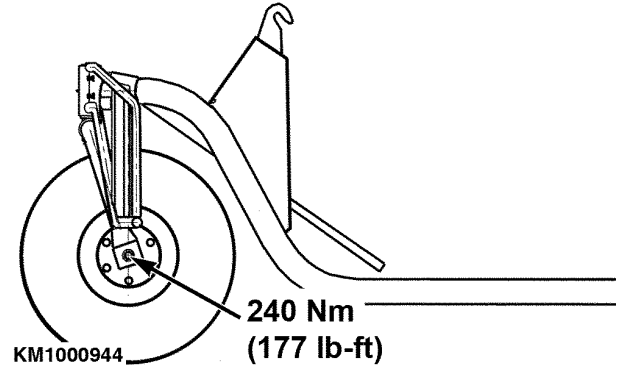
KM1000943 —UN—11AUG09

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KM00321,00001E5 -19-11AUG09-1/2

## Wheels

After the first hour of operation and then every 50 hours of operation, tighten wheel bolt to 240 Nm (177 lb-ft).



KM1000944 —UN—11AUG09

KM00321,00001E5 -19-11AUG09-2/2

## Tire Size

Type ..... 15.0/55-17 (14 PR)  
Width ..... 391 mm (15.39 in.)  
Diameter ..... 850 mm (33.46 in.)

KM00321,00001E6 -19-11AUG09-1/1

## Tire Inflation Pressures

*NOTE: The tire inflation pressures quoted in the table refer to the permissible axle load of 2000 kg (4409 lb) of the support wheel.*

SPEED	MAXIMUM LOAD	TIRE INFLATION PRESSURES
25 km/h (15 mph)	2000 kg (4409 lb)	210 kPa (2.1 bar) (30.5 psi)
30 km/h (19 mph)	2000 kg (4409 lb)	240 kPa (2.4 bar) (34.8 psi)
40 km/h (25 mph)	2000 kg (4409 lb)	280 kPa (2.8 bar) (40.6 psi)

KM00321,00001E7 -19-11AUG09-1/1

# Troubleshooting

## 400F Support Wheel

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,

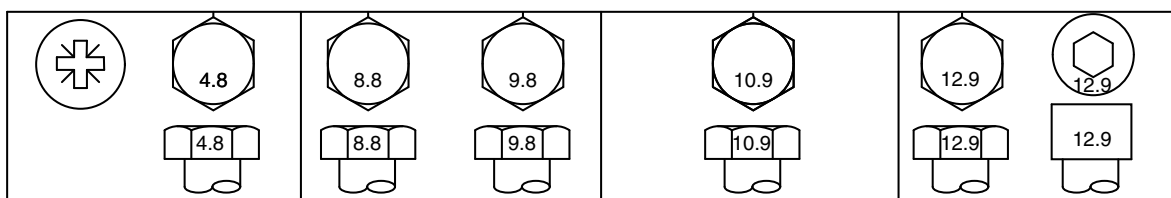
Symptom	Problem	Solution
<b>Support wheel is not locked.</b>	Locking device is not engaged in locking pawl	Repeat attaching procedure.
	Locking mechanism adjusted incorrectly	Adjust locking mechanism.
<b>Support wheel is not identified.</b>	Wiring harness of rotary harvesting unit not connected to forage harvester	Connect wiring harness.
	Faulty sensor	Replace the sensor.
	Clearance between sensors and magnets adjusted incorrectly	Adjust clearance.
	Wiring harness incorrectly configured	Contact your KEMPER dealer.
	Support wheel is not locked completely	Lock support wheel completely.

KM00321,0000420 -19-08APR15-1/1

# Lubrication and Maintenance

## Metric Bolt and Screw Torque Values

TS1670 —UN—01MAY03



Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated <sup>a</sup>		Dry <sup>b</sup>		Lubricated <sup>a</sup>		Dry <sup>b</sup>		Lubricated <sup>a</sup>		Dry <sup>b</sup>		Lubricated <sup>a</sup>		Dry <sup>b</sup>	
	Nm	lb.-in.	Nm	lb.-in.	Nm	lb.-in.	Nm	lb.-in.	Nm	lb.-in.	Nm	lb.-in.	Nm	lb.-in.	Nm	lb.-in.
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									Nm	lb.-ft.	Nm	lb.-ft.	Nm	lb.-ft.	Nm	lb.-ft.
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			Nm	lb.-ft.	Nm	lb.-ft.	Nm	lb.-ft.								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	Nm	lb.-ft.														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. 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 fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

<sup>a</sup>"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

<sup>b</sup>"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.

DX.TORQ2 -19-12JAN11-1/1

## 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 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.

KM00321,00001E9 -19-12AUG09-1/1

## Grease

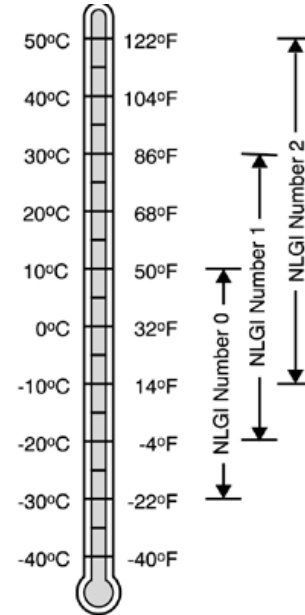
Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

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 —UN—09JUN09

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

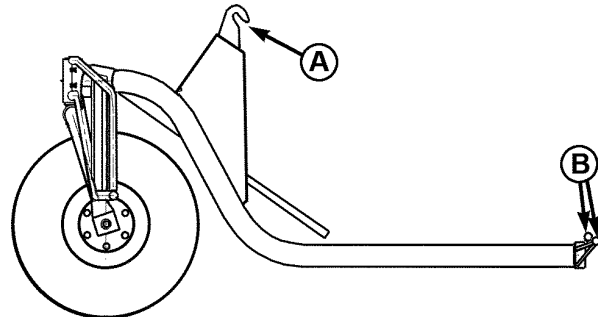
## Every 10 Hours - Hook and Locking Devices

Clean hook (A) and locking devices (B).

Apply a coat of grease to hook (A) and locking devices (B) using a brush.

A—Hook

B—Locking Devices



KM1000945

KM1000945 —UN—11AUG09

KM00321,000017D -19-16MAY12-1/1

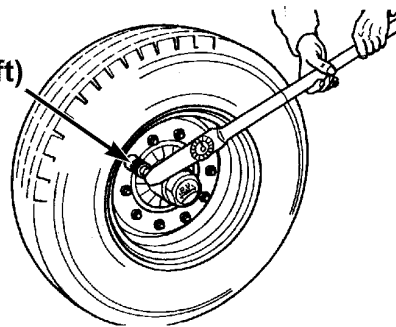
## Every 50 Hours - Wheel Nuts

Retighten wheel nuts.

### Specification

Wheel nuts—Torque.....350 Nm  
258 lb-ft

350 Nm  
(258 lb-ft)



KM1000943

KM1000943 —UN—11AUG09

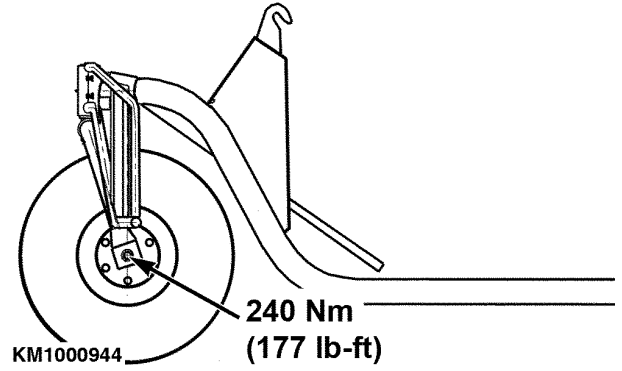
KM00321,00001ED -19-11AUG09-1/1



## Every 50 Hours - Wheel Bolts

Retighten wheel bolts.

Specification	
Wheel bolt—Torque.....	240 Nm 177 lb-ft



KM1000944

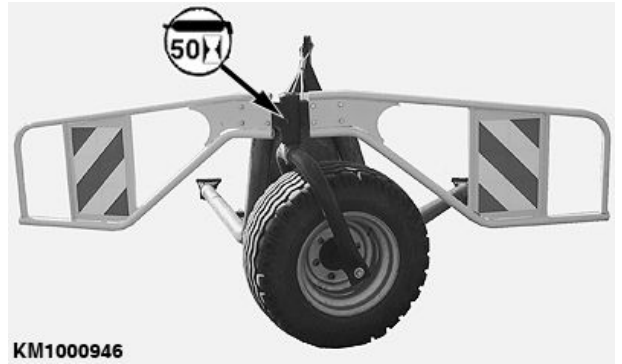
240 Nm  
(177 lb-ft)

KM1000944 —UN—11AUG09

KM00321,00001EE -19-11AUG09-1/1

## Every 50 Hours - Swivel

Lubricate with grease.



KM1000946

KM1000946 —UN—11AUG09

KM00321,000017E -19-16MAY12-1/1

## Every 50 Operating Hours—Wheel Hub

Grease wheel hub until grease is visible at the hub end.



KM256496

KM256496 —UN—16OCT15

KM00321,00004BA -19-21OCT15-1/1

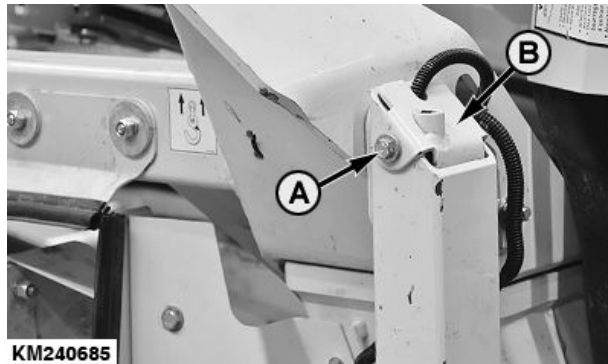
## Check the sensors and adjust them (only rotary harvesting units for Fendt forage harvesters)

**NOTE:** Perform this adjustment only if the support wheel is NOT recognized by the forage harvester software.

1. Take out screw (A) and pull out locking status indicator (B) from above.

A—Screw

B—Locking status indicator



KM240685

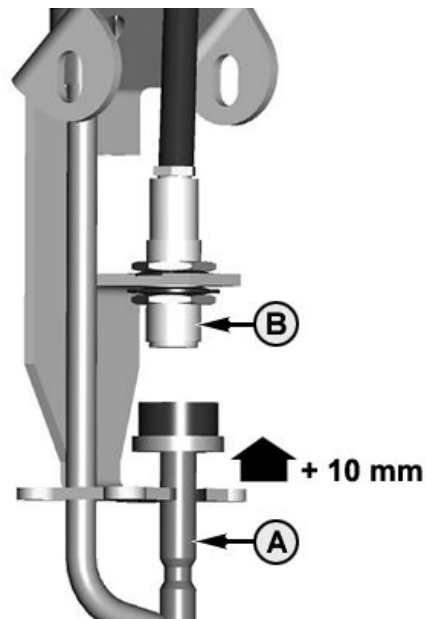
KM240685 —UN—02MAR18

KM00321,0000797 -19-02MAR18-1/3

2. Raise the rod by 10 mm (0.39 in.).
3. Adjust the fine thread of sensor (B) such that the sensor switches on when the rod (A) is raised by 10 mm (0.39 in.).
4. Secure sensor (B) with lock nuts.

A—Rod

B—Sensor



KM240687

KM240687 —UN—27MAR15

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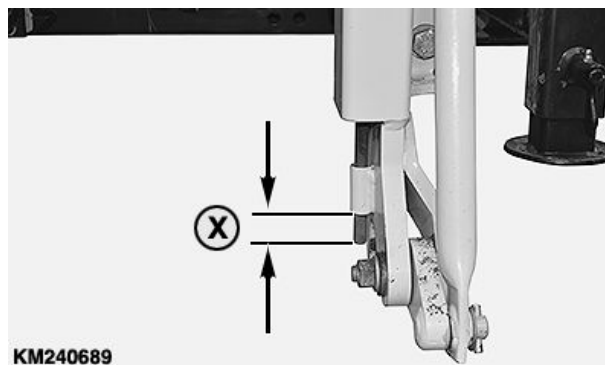
KM00321,0000797 -19-02MAR18-2/3

5. Insert the preset sensor unit.

Using slot holes (A), adjust the sensor unit such that dimension X = 17 mm (0.67 in.) is set at the bottom end of the rod.

A—Slots

X—17 mm (0.67 in.)



KM240688 —UN—02MAR18

KM240689 —UN—02MAR18

KM00321,0000797 -19-02MAR18-3/3

# Technical specifications

## 400F Support Wheel

Model designation ..... 400F

Suitable for rotary harvesting units ..... 460<sup>plus</sup>, 475 and 475<sup>plus</sup>

### Dimensions

Width ..... 2.86 m (9 ft. 4.6 in.)

Height ..... 1.43 m (4 ft. 8.3 in.)

Length ..... 3.30 m (10 ft. 9.9 in.)

### Weight

Axle load + dead weight ..... 2320 kg (5114.72 lb.)

Empty weight ..... 320 kg (705.48 lb.)

KM00321,0000422 -19-08APR15-1/1

## EC Declaration of Conformity

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

The person named below declares that  
the product

Machine type: Support wheel

Model: 400F

fulfills all relevant provisions 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

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

Brigitte Birk  
D-68008 Mannheim, Germany

Place of Declaration: 48703 Stadthohn,  
Germany

Name: Hannes Fischer

Date of declaration: 02 March 2018

Title: Manager Product Engineering

Manufacturing unit: Kemper Stadthohn

DXCE01 —UN—28APR09



KM00321,0000798 -19-02MAR18-1/1

# Serial Number

## Support Wheel Serial Number Plate

- |                                 |                               |
|---------------------------------|-------------------------------|
| A—Type                          | E—Year of Manufacture         |
| B—Model                         | F—Model Year                  |
| C—Product Identification Number | G—Permissible Front Axle Load |
| D—Weight                        |                               |

**Maschinenfabrik KEMPER**

Constr. year

Model year

CE

Maschinenfabrik Kemper GmbH & Co KG  
48703 Stadthorn

Weight  KG

Max. axle load  KG

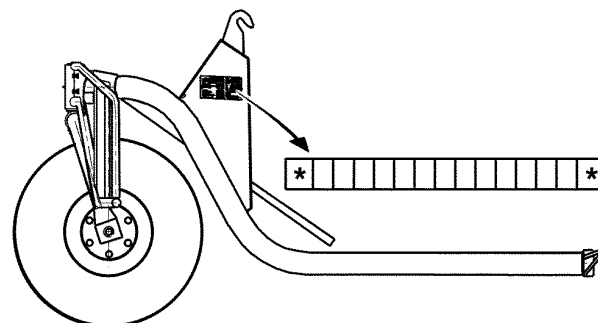
KM1002302

KM00321,000017C -19-16MAY12-1/1

KM1002302 —UN—15MAY12

## Serial Number

When ordering parts, always quote the support wheel serial number. The serial number is on a plate located on the left-hand side of the frame. Record serial number in the space provided opposite.



KM1000950

KM00321,00001F4 -19-12AUG09-1/1

KM1000950 —UN—12AUG09

*Serial Number*

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