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DC92
Disc Mower Conditioner

SERVICE MANUAL

Part number 48068913
English
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Replaces part number 84207979

CASE IH AGRICULTURE

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Safety rules

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: *Notice indicates a situation that, if not avoided, could result in machine or property damage.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: *Note indicates additional information that clarifies steps, procedures, or other information in this manual.*

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

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Torque - Nominal tightening torques for normal assembly

NOTE: *In the metric tables, nominal sizes M4 through M8 hardware torque specifications are shown as a Newton meters (pound-inches) numerical value.*
Nominal sizes M10 through M24 hardware torque specifications are shown as a Newton meters (pound-feet) numerical value.

Metric hex head (non-flange) hardware

Plain (PLN) – an unplated hardware finish with residual manufacturing oils
Zinc-dichromate (ZND) – a yellow colored chemical plating formula yellow applied to the hardware

Nominal size	Class (CL) 8.8 bolt and Class (CL) 8 nut	Class (CL) 10.9 bolt and Class (CL) 10 nut	Locknut CL 8 w/CL 8.8 bolt	Locknut CL 10 w/CL 10.9 bolt
	PLN and ZND	PLN and ZND	ZND	ZND
	N·m (lb in)	N·m (lb in)	N·m (lb in)	N·m (lb in)
M4	3.5 (31)	5.0 (44)	1.4 (13)	2.8 (25)
M5	7.0 (62)	10 (88)	2.9 (26)	5.5 (49)
M6	11.8 (104)	17 (150)	4.9 (43)	9.4 (83)
M8	28.8 (255)	41.3 (366)	11.9 (105)	23 (204)
	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)
M10	57 (42)	82 (60)	24 (17)	45 (33)
M12	100 (74)	143 (105)	41 (30)	79 (38)
M14	159 (117)	227 (168)	66 (48)	125 (92)
M16	248 (183)	354 (261)	102 (75)	195 (144)
M18	352 (260)	487 (359)	145 (107)	268 (198)
M20	500 (369)	690 (509)	206 (152)	380 (280)
M24	865 (638)	1195 (882)	357 (263)	657 (485)

Metric flange head hardware

Plain (PLN) – an unplated hardware finish with residual manufacturing oils
Zinc-dichromate (ZND) – a yellow colored chemical plating formula yellow applied to the hardware

Nominal size	Class (CL) 8.8 bolt and Class (CL) 8 nut	Class (CL) 10.9 bolt and Class (CL) 10 nut	Flange locknut CL 8 w/CL 8.8 bolt	Flange locknut CL 10 w/CL 10.9 bolt
	PLN and ZND	PLN and ZND	ZND	ZND
	N·m (lb in)	N·m (lb in)	N·m (lb in)	N·m (lb in)
M4	3.8 (34)	5.5 (49)	4.2 (37)	6.1 (54)
M5	7.7 (68)	11 (97)	8.5 (75)	12 (106)
M6	13 (115)	18.7 (166)	14.3 (127)	20.6 (182)
M8	31.7 (281)	45.5 (403)	35 (310)	50 (443)
	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)
M10	63 (47)	90 (66)	69 (51)	99 (73)
M12	110 (81)	157 (116)	121 (89)	173 (128)
M14	175 (129)	250 (184)	193 (142)	275 (202)
M16	272 (201)	389 (287)	299 (221)	428 (316)
M18	387 (286)	535 (395)	426 (315)	589 (435)
M20	550 (406)	759 (560)	605 (447)	835 (616)
M24	951 (702)	1315 (970)	1046 (772)	1447 (1067)

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Capacities

The following table lists the types of consumable products for use when you perform general service on this machine.

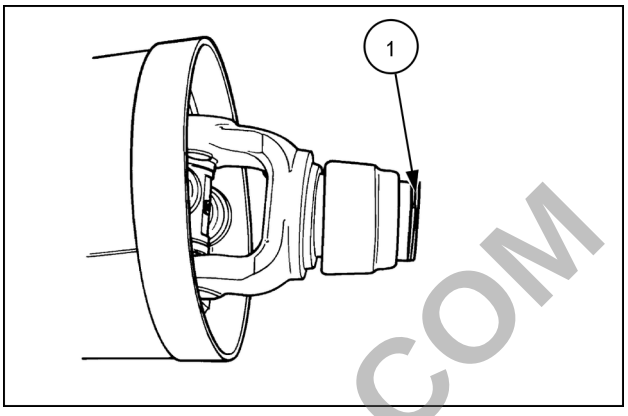
Consumable product	Material specification	Use	Capacity
Grease lubricant			
CASE IH AKCELA 251H EP MULTI-PURPOSE GREASE	CNH Industrial: **MAT3550** Performance: **NLGI 2**, GC-LB	All grease fittings	As specified.
		Wheel bearings – Repack	Not specified; amount as required
Lubricating oils			
TUTELA HYPOIDE EP GEAR LUBE SAE 80W-90 OR **CNH HYPOIDE SSL SYNTHETIC GEAR LUBE 75W-90** (synthetic)	CNH Industrial: **MAT3511** Performance: **API GL-5**, **SAE J2360**, **MIL-PRF-2105E**	Conditioner drive gearbox	**200 mL** (**7 US fl oz**)
		Bevel gearbox	**1000 mL** (**34 US fl oz**)
		Cutterbar modules	**300 mL** (**10 US fl oz**) each

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Yoke assembly - Disassemble - Auto slide lock

1. Pull the Auto slide lock collar rearward until it latches in place. Use a screwdriver or spring pick to remove the retaining ring **(1)** from the end of the yoke.

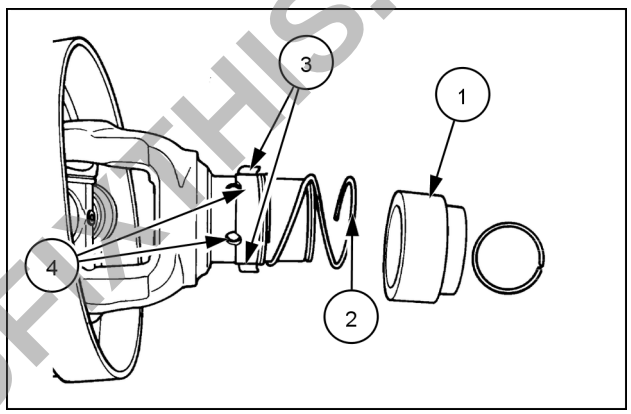


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2. Slide the collar **(1)** off the yoke and remove the spring **(2)** from the yoke barrel.

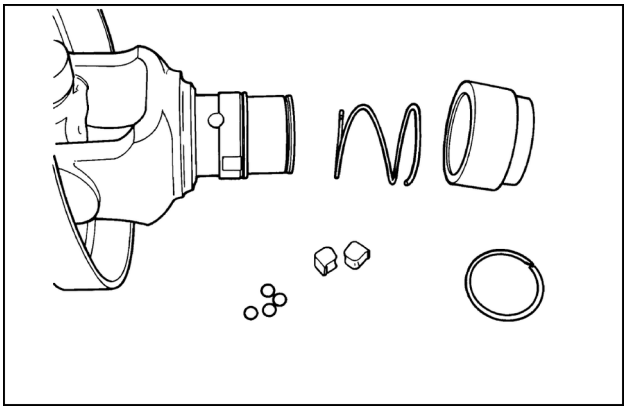
NOTE: *The spring is an interference fit and will have to be worked off the yoke barrel.*

3. Remove the pawls **(3)** by reaching into the yoke bore and pushing the pawls outwards so that they can be removed. Remove the four centering balls **(4)** from the yoke using the same process.



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4. Thoroughly clean all slide lock components. Clean the yoke bore and pawl holes. Replace the yoke if damage or excessive wear is found.



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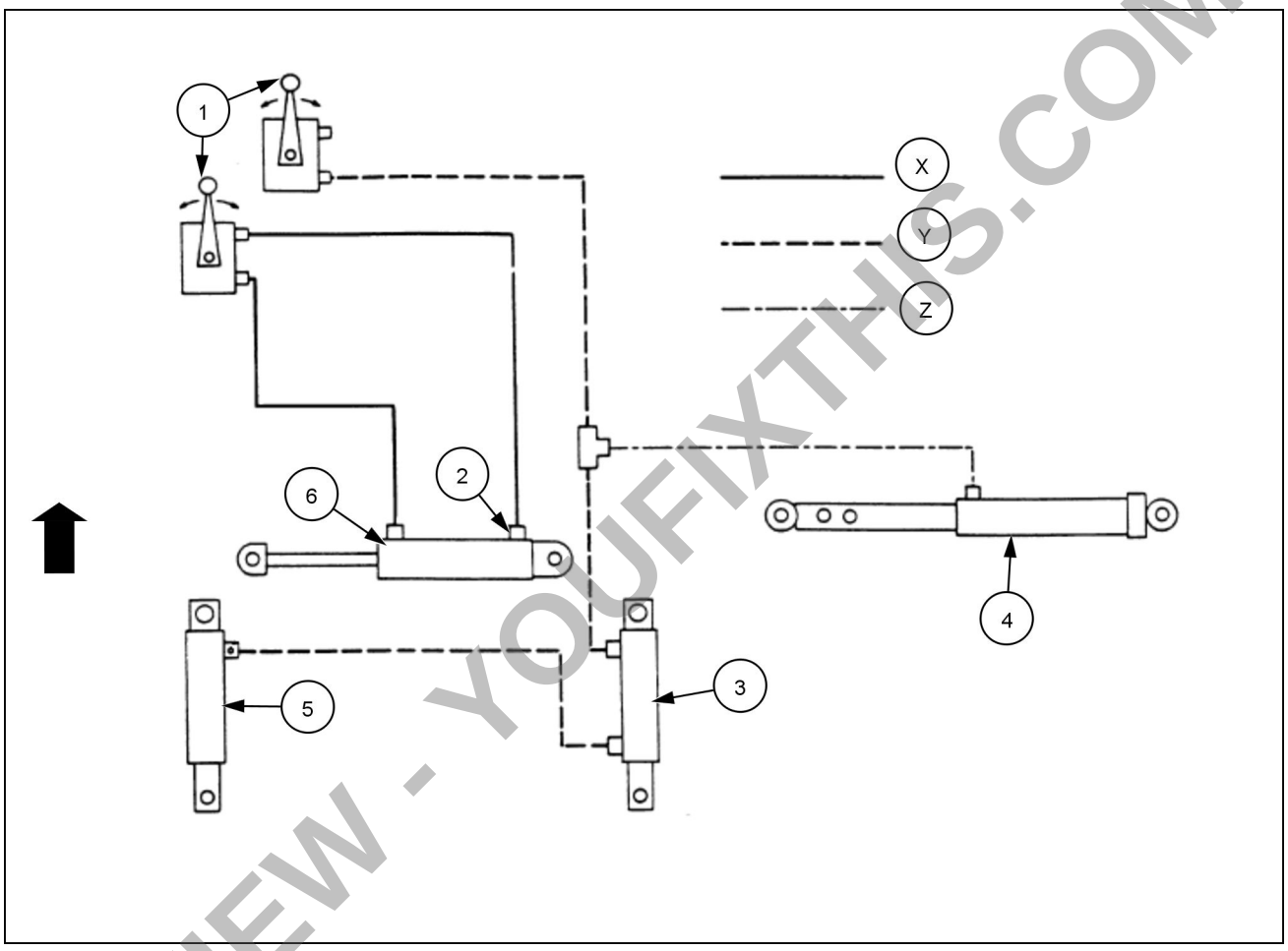
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Hydraulic systems - Overview

⚠ WARNING

Escaping fluid!
Relieve all pressure before disconnecting fluid lines or performing work on the hydraulic system. Make sure all components are in good condition and tighten all connections before pressurizing the system. DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.
Failure to comply could result in death or serious injury.

W1140A



1431-8-8 1

Hydraulic diagram

Ref.	Component	Ref.	Component
(1)	Tractor remote valves	**(4)**	Tilt cylinder (If equipped)
(2)	**1.9939 mm** (**0.0785 in**) Orifice (A component of **(6)**)	**(5)**	Slave cylinder
(3)	Master cylinder	**(6)**	Swing cylinder

Hydraulic circuit type					
Ref.	**Circuit**	**Ref.**	**Circuit**	**Ref.**	**Circuit**
(X)	Tongue shift	**(Y)**	Header lift	**(Z)**	Header tilt

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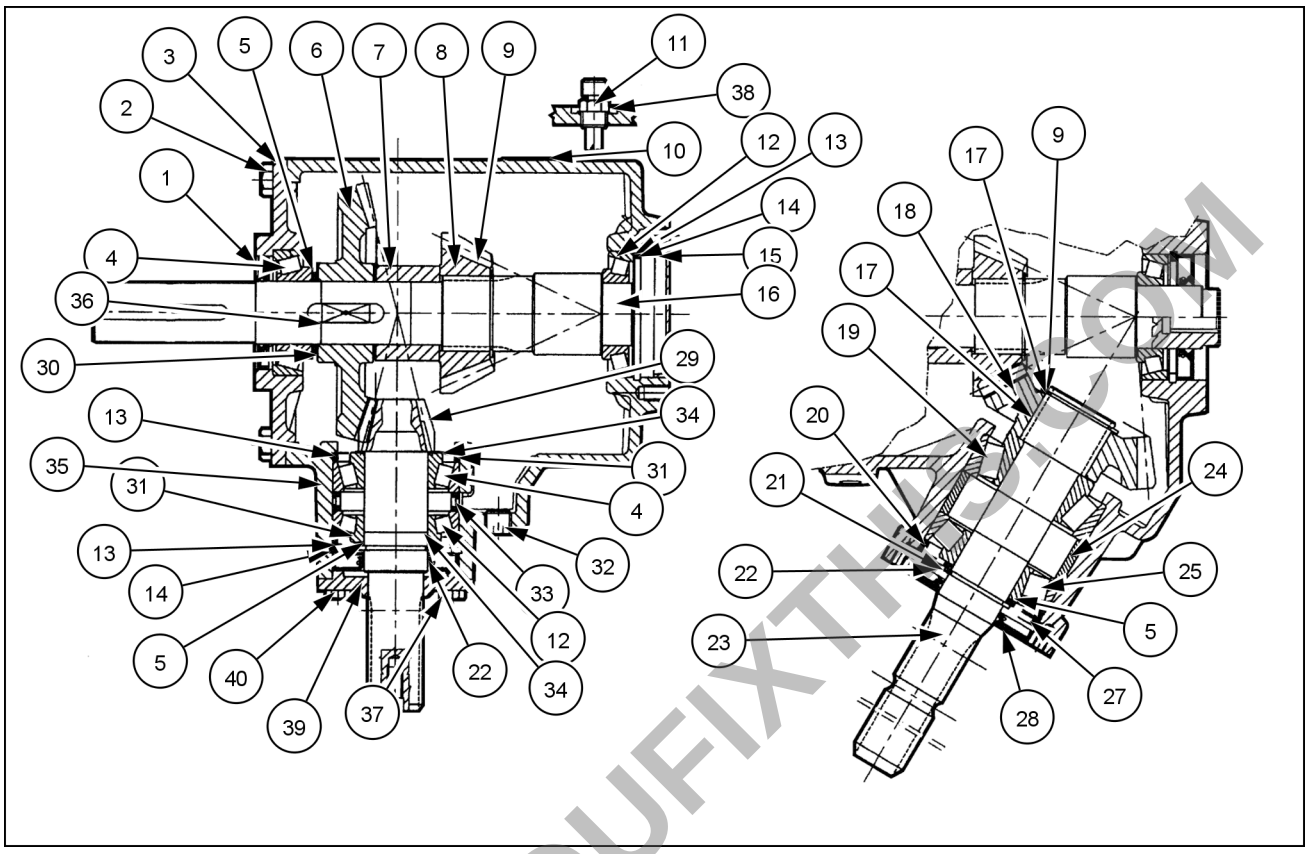
Attachment/Header cutting mechanism - Troubleshooting

Problem	Possible Cause	Correction
Leaves damaged or stripped off stems.	Too much pressure on the rolls.	Reduce the pressure until the leaves are not damaged.
Leaving ragged or long stubble.	Ground speed too fast.	Reduce the ground speed.
	Dull, bent, or broken knives.	Turn over or replace the knives.
	Knives installed on wrong discs.	Install knives on correct discs.
	PTO speed too slow.	Maintain rpm on the tractor PTO. (Do not overspeed.)
	Cutting too high.	Remove high stubble kit, if installed. Increase header tilt.
	Header flotation too light.	Adjust flotation springs to increase header flotation weight.
	Wheel arm linkage binding.	Remove, clean, and lubricate wheel arm pin.
Excessive breakage of the knives.	Cutting too low in stony conditions	Raise the cutting height with header tilt. Install high stubble kit.
	Header flotation too heavy for stony fields.	Adjust the flotation springs to float the header with **45 kg** (**99 lb**) force, per side.
	Ground speed too high in stony conditions.	Reduce ground speed.
Not cutting short enough in down material.	Ground speed too fast.	Reduce ground speed.
	Broken, bent, or dull knives.	Replace the knives or turn over the knives.
	Cutting height too high.	Lower the cutting height by tilting the header.
	Tractor PTO speed too slow.	Maintain tractor PTO rpm. (Do not overspeed.)
Strip of run-down, uncut material.	Ground speed too fast.	Use slower ground speed.
	Crowding of the uncut material.	Do not crowd the uncut material.
	Missing or dull knives.	Replace or turn over the knives.
	Material buildup on cutterbar.	Clean off cutterbar. Tilt cutterbar back towards horizontal to reduce material buildup.
	PTO speed too high.	Slowing PTO speed will reduce air flow from the cutterbar.
	One disc not rotating.	Replace shear bolt hub.
Forming poor or bunchy windrow.	Tractor PTO speed too slow.	Maintain rpm on the tractor PTO. (Do not overspeed.)
	Incorrect swath gate adjustment.	Adjust the swath gate to even discharge flow.
	Incorrect windrow shield adjustment.	Adjust the windrow shields.
Pulling material out of the ground when cutting back swath or tall material is leaning into the machine.	Excessive roll pressure.	Reduce roll pressure or increase roll clearance.
Excessive power requirements.	Ground speed too slow.	Use faster ground speed.
Material being discharged out of the left side of the machine.	Cutterbar not taking a full cut; No. 1 disc not running in standing crop.	Shift unit right into standing crop to take full cut.
	Inner left side curtain worn or damaged.	Replace inner left side curtain.
Soil buildup on front of cutterbar.	Very wet crop conditions.	Adjust flotation springs to reduce header flotation weight. Raise the cutting height with header tilt. Install high stubble kit.
Loose knife hardware.	Impact with rock.	Install high stubble kit. Inspect for damage, retighten hardware.
Cutterbar does not turn easily by hand.	Buildup of dirt or twine under discs.	Remove disc and disc hub if necessary to clear debris.

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Bevel gearbox - Component identification



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Ref. No.	Description	Qty.
(1)	Double Lip Seal- **40 x 72x7 mm** (**1-9/16 x 2-53/64 x 17/64 in**)	1
(2)	Bolt- M10 x 1.50 x 25 mm	8
(3)	Cover	1
(4)	Bearing (32208)	2
(5)	Shim- **51.5 mm** (**2 -1/64 in**)	4
(6)	Cross Shaft Crown Wheel- 47 Teeth, Module- 3.5	1
(7)	Spacer- **40.5 x 60.3 x 40.1 mm** (**1-1/16 x 2-1/32 x 1-1/16 in**)	1
(8)	Cross Shaft Pinion- 17 Teeth, Module- 5.41	1
(9)	Snap Ring	2
(10)	Identification Plate	1
(11)	Fill plug- 3/8 in x16	1
(12)	Bearing (30208)	2
(13)	Shim- **79.9 mm** (**3-5/32 in**)	3
(14)	Snap Ring	2
(15)	Cap- **80 x 10 mm** (**3-5/32 in**)	1
(16)	Shaft	1
(17)	Shim- **48.2 x 54.8 mm** (**1 -57/64 x 2-5/32 in**)	2
(18)	Input Crown Wheel - 23 Teeth; Module- 5.41	1
(19)	Bearing (32308)	1
(20)	Shim- **89.7 mm** (**3 -37/64 in**)	1
(21)	Shim- **40.3 x 2.0 mm** (**1-19/32 x 5/64 in**)	1
(22)	Snap Ring	2
(23)	Shaft- 6 Teeth; **34.93 mm** (**1-3/8 in**)	1
(24)	Spacer- **79 x 89.8 x 29 mm** (**3-7/64 x 3-17/32 x 1-9/64 in**)	1
(25)	Bearing (30308)	1
(26)	Spacer	1

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Specifications

Roll conditioner units only

Overall Width	
Transport position	**3020 mm** (**9 ft 11 in**)
Field position	**4520 mm** (**14 ft 10 in**)
Overall Length	
Transport position	**5400 mm** (**17 ft 7 in**)
Field position	**5230 mm** (**17 ft 2 in**)
Height	
Transport position	**1730 mm** (**5 ft 8 in**)
Cutting position	**1350 mm** (**4 ft 5 in**)
Ground Clearance (transport)	**432 mm** (**17 in**)
Wheel Tread Width	**2300 mm** (**7 ft 6 in**)
Weight	
Shipping	**1787 kg** (**3940 lb**)
Operating	**1674 kg** (**3690 lb**)
Driveline	
Tractor Requirement	**49 kW** (**65 Hp**) Minimum with two remote circuits with minimum of **1043 kPa** (**150 psi**) relief pressure
Input Speed	**540 RPM**
Drive Protection	Main driveline - slip clutch with overrunning clutch, conditioner roll drive - V belt with spring loaded idler
Header	
Cutting Width	**2800 mm** (**9 ft 2 in**)
Flotation	Vertical and lateral springs
Windrow Width	**914 - 1830 mm** (**36 - 72 in**)
Header Lift	Hydraulic (master-slave system)

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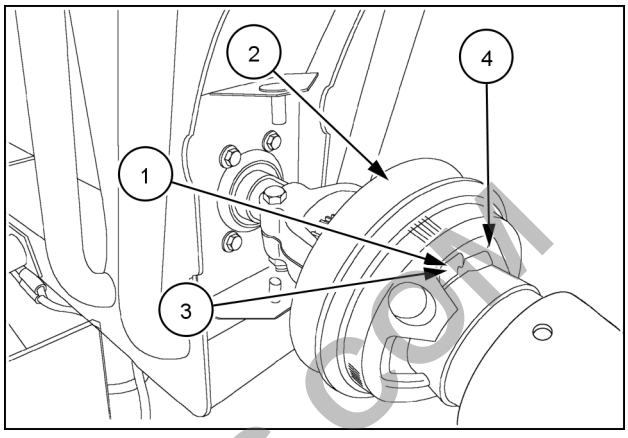
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Drive shaft - Remove - Standard driveline shields

1. Insert a screwdriver into the slot **(1)** in the bell end of the guard **(2)**.
2. Pry the yellow tab **(3)** open. Repeat this procedure at each slot.
3. Rotate the white ring **(4)** until the tabs on the ring align with the slots on the guard.
4. Slide the guard off of the driveshaft.



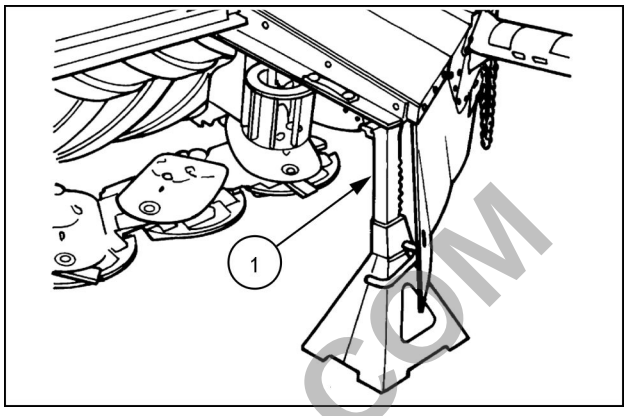
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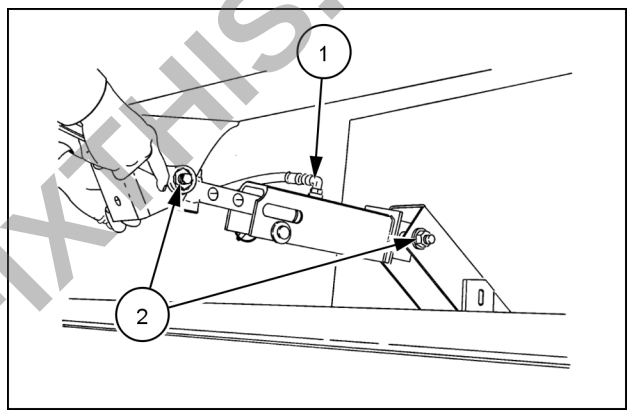
Cylinder - Remove - Header tilt cylinder

1. Place the header tilt position pin in the **10 °** position.
2. Position jack stands **(1)** or blocking at the front of the header to support it in a horizontal position when it is lowered. Lower the header fully to the ground and allow the header to roll forward onto the jack stands to relieve the pressure on the tilt cylinder mounting pins.



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3. Disconnect the hydraulic hose **(1)** from the tilt cylinder.
4. Remove the front and rear anchor bolts **(2)** and remove the tilt cylinder. Note the position of washers used to center the cylinder rod.



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Discs

Each time knives are replaced or turned, check the discs for damage and wear. If a disc is bent or cracked replace it. When the leading edge **(1)** of the disc wears thin it can be used on an opposite rotating module to utilize the second face.

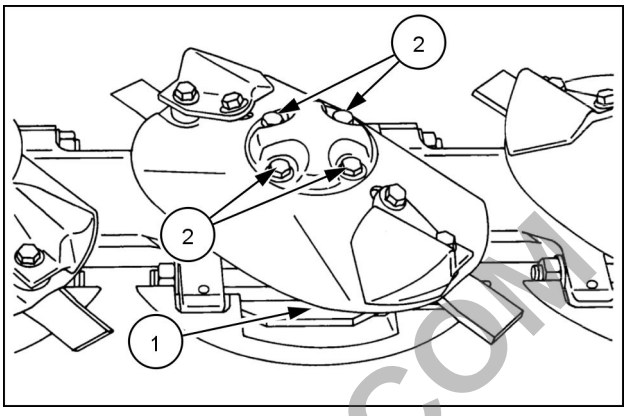
NOTICE: *Do not make weld repairs to the discs as this will affect disc strength and balance.*

Remove discs by removing bolts at **(2)**.

Discs with towers can also be removed. On the right-hand side, remove the retaining bolts and remove the tower and disc.

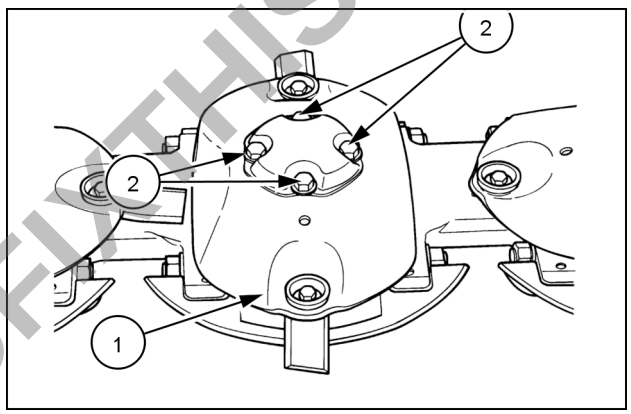
On the left-hand side, it will be necessary to remove the wear plates, if equipped, from the tower **(1)** to provide additional clearance. Remove the retaining bolts and slide the tower **(1)** and drive shaft **(2)** upwards and to the side in order to remove the disc.

Roll machine

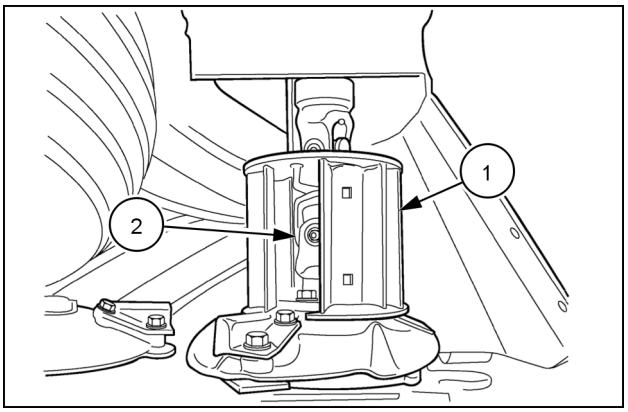


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Flail machine



A3996-14N 12



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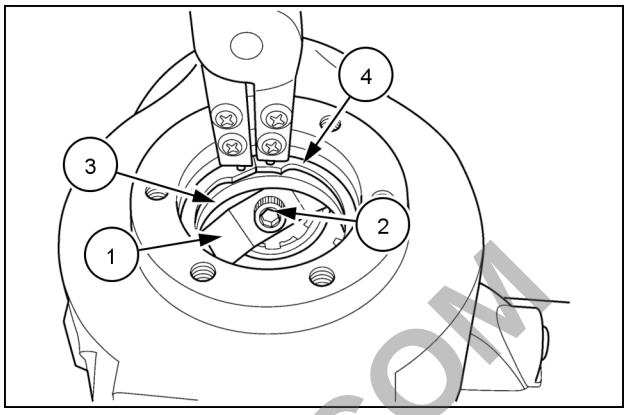
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14. Install the strap **(1)** and secure with the bolt and the lock washer **(2)**.
15. Install the main shaft outer bearing race **(3)**, followed by the shims and the large snap ring **(4)**.



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Set Axis

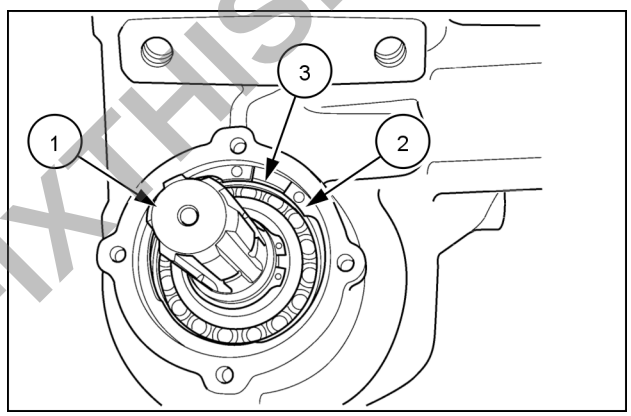
1. Hit the end of the input shaft **(1)** with a rubber hammer to seat the bearing and the shims.
2. Check the bearing preload with a torque wrench. The correct specification is **0 - 1 kg/cm** (**0 - 1.87 lb/in**).
3. If the preload is not within the specification, remove the snap ring **(2)** and add or remove the necessary shims **(3)** to achieve the correct preload. Install the snap ring.

NOTICE: *Make sure that the shaft does not have any preload on it or bearing failure may result.*

NOTICE: *Do not add or remove shims between the bearing cup and snap ring in the cutterbar shaft bearing cap, as this will affect the gear position in the gearbox.*

NOTICE: *Make sure that you use the same exact shims from removal, to install all new components. This is crucial to gain the correct clearances.*

NOTE: *Lubricate all seals prior to assembly.*



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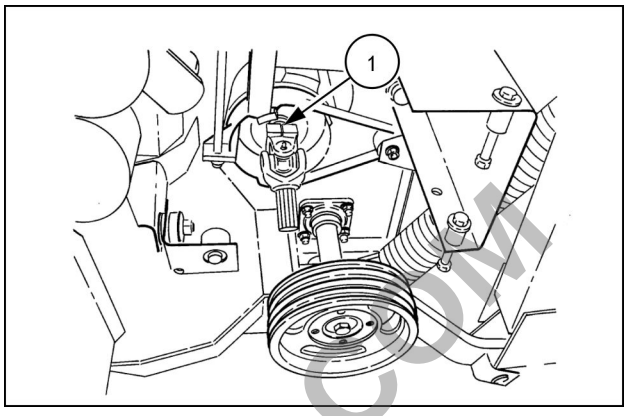
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Upper conditioner roll - Remove

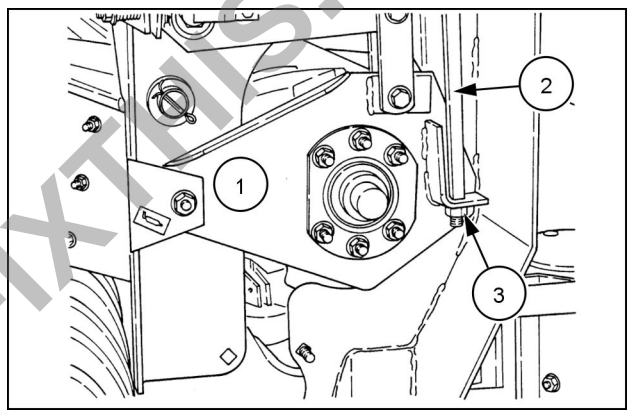
Remove the lower conditioner roll. See **Lower conditioner roll - Remove (60.620)**.

1. Remove the drive shaft from the left-hand side of the upper conditioner roll by removing the clamp bolts **(1)** and nuts at the end of the drive shaft. Slide the yoke off of the upper conditioner roll shaft and remove the drive shaft from the unit.



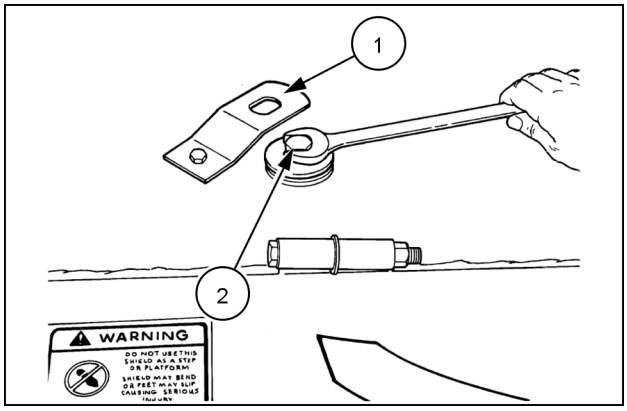
19992640N 1

2. The right-hand side pivot arm **(1)** must be removed in order to remove the roll. Remove the roll gap bolt **(2)** by removing the nut **(3)** on the bottom of the bolt.



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3. Raise the lock plate **(1)** and swing it to the side. Lift the adjusting nut **(2)** and bolt out of the header.



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