MD72, MD82, MD92 Disc Mowers

Service Manual

84207378 5/09
1st Printing

CASE IH AGRICULTURE

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SECTION 00 – GENERAL INFORMATION

Chapter 1 – General Information

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SPECIFICATIONS

	MD72	MD82	MD92
Cutter Bar			
Cutting Width	2040 mm (6 ft 8 in)	2400 mm (7 ft 10 in)	2800 mm (9 ft 2 in)
Cutting Height	32 mm - 89 mm (1.25 in - 3.5 in)	32 mm - 89 mm (1.25 in - 3.5 in)	32 mm - 89 mm (1.25 in - 3.5 in)
Cutter Bar Tilt Angle	0° to –10°	0° to –10°	0° to –10°
Cutter Bar Operating Range	+18° to -32°	+18° to -30°	+18° to -28°
Breakaway Angle	19°	30.5°	30.5°
Type	Modular	Modular	Modular
No. of Discs	5	6	7
Knives Per Discs	2	2	2
Disc Cutting Diameter	500 mm (19.7 in)	500 mm (19.7 in)	500 mm (19.7 in)
Disc Drive	Bevel gears in sealed modules	Bevel gears in sealed modules	Bevel gears in sealed modules
Disc Speed	3000 rpm	3000 rpm	3000 rpm
Driveline			
PTO HP Required . (minimum)	45	55	60
Input Speed	540 rpm	540 rpm	540 rpm
Driveline Protection	Belt drive to cutter bar, overrunning clutch on PTO shaft	Belt drive to cutter bar, overrunning clutch on PTO shaft	Belt drive to cutter bar, overrunning clutch on PTO shaft
Belt Tension	Spring loaded tensioner w/ adjustment gauge	Spring loaded tensioner w/ adjustment gauge	Spring loaded tensioner w/ adjustment gauge
Hydraulics and Hitch			
Hydraulic Circuits Required	One remote	One remote	One remote
Minimum Relief Pressure Required	104 bar (1500 psi)	104 bar (1500 psi)	104 bar (1500 psi)
Hitch	Category I	Category II	Category II
Dimensions and Weight			
Overall Width	3524 mm (138.75 in)	4070 mm (160.25 in)	4616 mm (181.75 in)
Overall Length	1283 mm (50.5 in)	1283 mm (50.5 in)	1283 mm (50.5 in)
Height, Transport Position*	2489 mm (98 in)	3035 mm (119.5 in)	3581 mm (141 in)
Weight	546 kg (1200 lbs)	639 kg (1405 lbs)	698 kg (1535 lbs)

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TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
Vibration.	PTO shaft or U-joint damage.	Inspect and repair PTO shaft.
	Material buildup in cutter bar drums.	Remove top cover and clean out drums.
	Cutter bar components damaged or missing.	Inspect and repair components.
Cutter bar not floating.	Main frame setting incorrect.	Adjust check chains to carry main frame 450 mm (18 in) from ground and parallel.
	Cutter bar pivot points binding.	Clean and lubricate pivot points.
	Flotation system not engaged.	Install jack pin into flotation spring upper rod.
	Flotation spring adjustment.	Adjust flotation spring tension.
	High stubble kit installed.	Readjust check chains to carry main frame 508 mm (20 in) from ground and parallel.
Machine breaking back too easily.	Insufficient tension on breakaway spring.	Tighten breakaway spring until nut bottoms out.
	Ground speed too fast for crop conditions.	Reduce ground speed.
	Insufficient cutter bar flotation.	Check and adjust flotation system.
Difficulty in obtaining correct angle on cutter bar.	Lack of adjustment on top link.	Reposition top link to rear hole in main frame.
Uneven stubble/streaking.	Too much tilt on cutter bar.	Reduce tilt.
	Low PTO speed.	Run PTO at 540 rpm. (Do not over-speed)
	Excessive forward speed.	Reduce forward speed.
	Knives dull or broken.	Install new knives.
	Knives stuck under disc.	Straighten or replace knives.
	Knives installed on wrong discs.	Install knives on correct discs.
	Drive belt loose.	Tighten drive belt spring to correct length.

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⚠ WARNING ⚠

All Service, Lubrication and Adjustment procedures in this manual should be performed with the machine on a FIRM level surface, with all attachments down on the surface, engine off and key removed, unless otherwise specified. Failure to comply could result in death or serious injury.

M1404

NOTICE: *The machine should be checked daily for oil leaks. Any leak should be fixed immediately.*

NOTICE: *Clean the area around all plugs and grease fittings prior to removing or greasing.*

NOTICE: *All oil levels are checked with the cutter bar level both from front to back and side to side.*

NOTICE: *Use a good grade of grease gun grease at all grease points.*

BEVEL GEARBOX

Check the bevel gearbox oil every 50 hours. The oil level should be at the bottom of check plug, 1. Remove plug, 2, to add oil.

Change the bevel gearbox oil after the first 50 hours of use to remove any contaminants from the break-in process. After this, change the oil every 200 hours or yearly, whichever occurs first. Drain oil by removing plug, 1, with the cutter bar in the vertical (transport) position. The bevel gearbox holds 1100 ml (37 oz).

⚠ CAUTION ⚠

Lower the three-point hitch to support the cutter bar on blocking prior to draining the oil. Make sure the transport lock is engaged. Failure to comply may result in minor or moderate injury.

M1497

Maintain oil level using Case IH Akcela 135 H EP 80W90 gear oil.

NOTICE: *Belt and belt shielding shown removed for clarity.*

GREASE FITTINGS

Grease fittings are identified by numbers in the following figures. Recommended lubrication intervals are listed after each description.

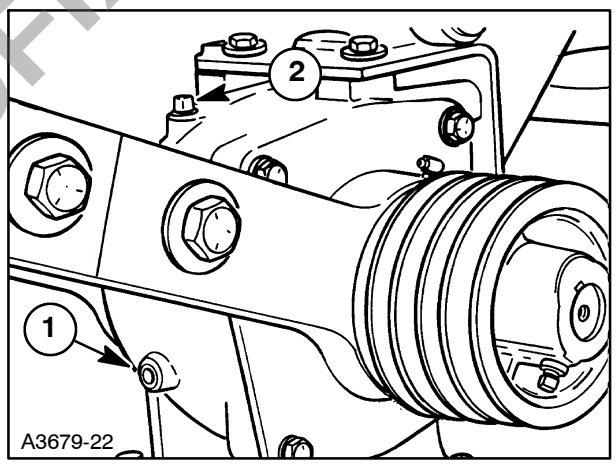
GEARBOXES

Oil for the gearboxes and cutter bar modules is available from your Case IH dealer.

Maintain oil level using Case IH Akcela 135 H EP 80W90 gear oil.

NOTICE: *Failure to use the correct specification of oil may lead to premature failure of the gearbox components.*

NOTICE: *Change the oil in all gearboxes after the first 50 hours of use to remove any contaminants from the break-in process.*



1

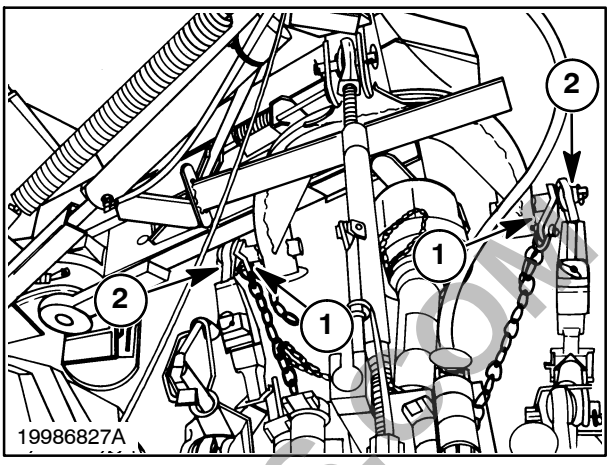
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ATTACHING THE MOWER TO THE TRACTOR

Model MD72

1. Clean all paint or rust from the hitch pins.
2. Attach the plate on the end of the check chains to the outer end of frame hitch pins, 1, as required to clear obstructions on the tractor. Install the check chain plates before attaching the tractor lower links.
3. Back the tractor to the mower and attach the lower links, 2, to the outer end of the frame hitch pins. Secure the links with linchpins. Install the linchpins from the top down.



2

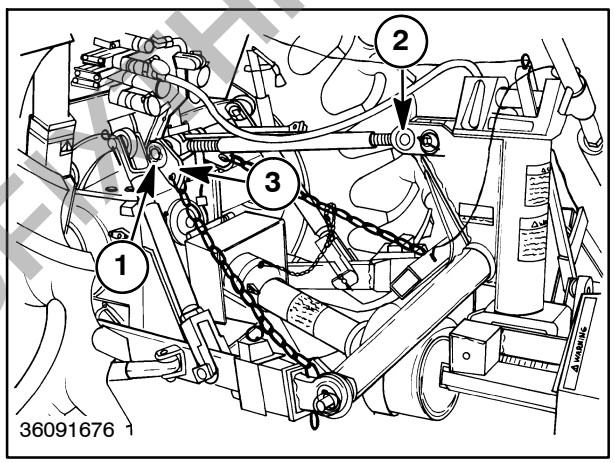
4. Attach the top link to the tractor, 1, using the pin provided with the tractor top link.
5. Attach the top link to the mower, 2, in the front hole using the pin provided with the mower.

NOTICE: *If necessary, the top link may be mounted in the rear hole on the mower to allow greater top link length range.*

6. Attach the check chain plates to the tractor at a top link mounting position, 3, with the pin provided.

NOTICE: *If the check chains interfere with or could damage the tractor PTO shield, relocate the check chain plates to the opposite end of the mower frame hitch pins, or attach to a different location on the tractor.*

NOTICE: *It may be necessary to position the tractor drawbar to the side or remove it to prevent interference with the check chains or PTO shaft.*



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PRECAUTIONARY STATEMENTS

PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements ("**DANGER**", "**WARNING**", and "**CAUTION**") followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.

DANGER

This word "DANGER" indicates an immediate hazardous situation that, if not avoided, will result in death or serious injury. The color associated with Danger is RED.

M1169

WARNING

This word "WARNING" indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The color associated with Warning is ORANGE.

M1170

CAUTION

This word "CAUTION" indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

M1171

FAILURE TO FOLLOW THE "DANGER", "WARNING", AND "CAUTION" INSTRUCTIONS MAY RESULT IN DEATH OR SERIOUS BODILY INJURY.

MACHINE SAFETY

The precautionary statement ("NOTICE") is followed by specific instructions. This statement is intended for machine safety.

NOTICE: *The word "NOTICE" is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.*

INFORMATION

NOTICE: *Instructions used to identify and present supplementary information.*

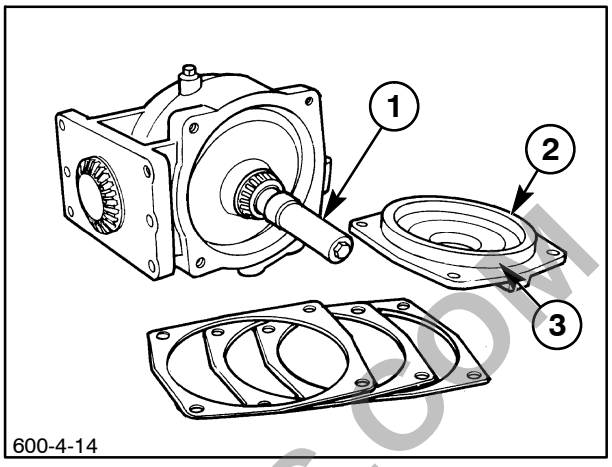
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5. Press the bearing cones onto the input shaft, and install the appropriate bearing cups into the housing and cover. Do not install the seal into the cover yet. Install the input shaft, 1, and cover, 2, onto the gearbox, and shim (shim pack thickness of 0.025 inch is a good starting point) between the housing to obtain the appropriate rolling torque per the attached chart:

Output Shaft Rolling Torque N·m (lb in)	Input Shaft Rolling Torque N·m (lb in)
0.23 (2)	0.9-1.36 (8-12)
0.34 (3)	1.24-1.69 (11-15)
0.45 (4)	1.58-2.03 (14-18)
0.56 (5)	1.92-2.37 (17-21)
0.68 (6)	2.26-2.71 (20-24)

6. After setting the input shaft rolling torque, remove the cover and install the shaft seal by driving it into the bore until it seats against the shoulder in the cover. Grease the seal lip liberally before reinstalling the cover. Apply silicone sealant to the cover sealing flange, 3, reinstall the cover and tighten the hardware.



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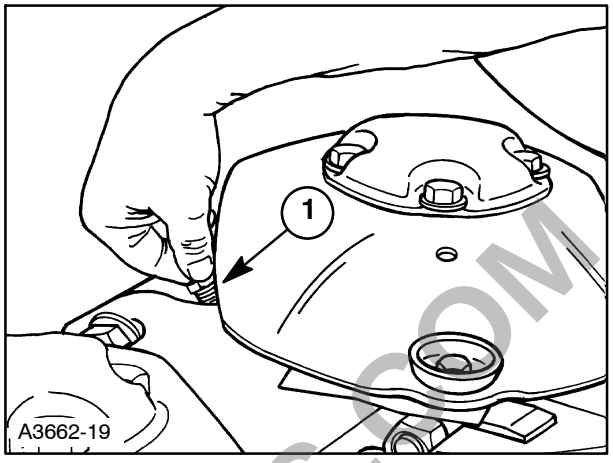
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CUTTER BAR MODULES

Check the module oil every 50 hours. Each module must be checked. The cutter bar must be level from side to side and front to back. Park on a level surface and adjust the top link to level cutter bar.

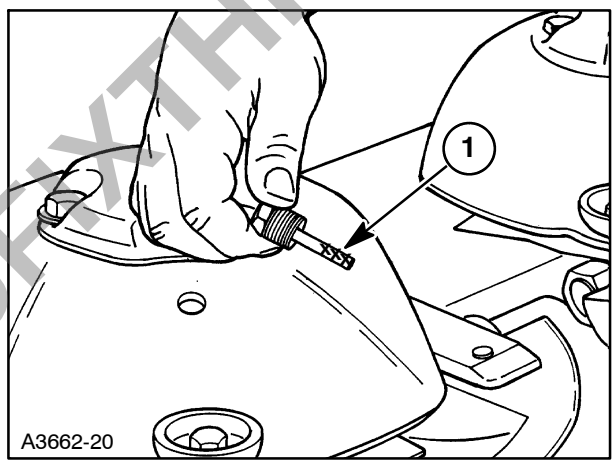
1. Remove dipstick, 1, wipe it clean.
2. Hold the dipstick firmly in place into the hole but do not thread it in.



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3. Remove the dipstick and observe the oil level. The level is correct when it is anywhere within the marked area at the end, 1, of the dipstick.

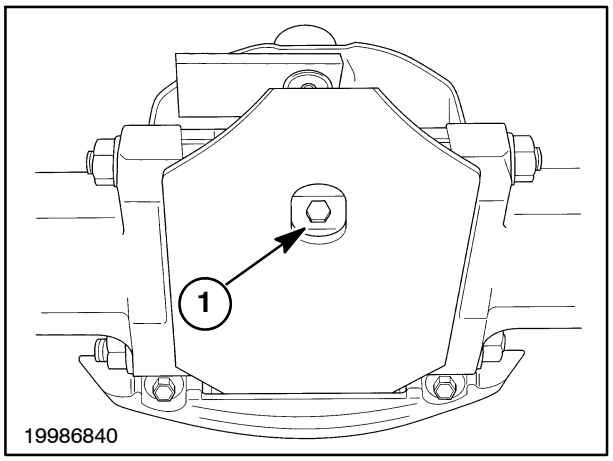
   Maintain the oil level using Case IH Akcela 135 H EP 80W90 gear oil.



5

Change the module oil after the first 50 hours of use to remove any contaminants from the break-in process. After this, change the oil every 200 hours or yearly, whichever occurs first.

Drain the oil by removing the plug on the bottom of the module.

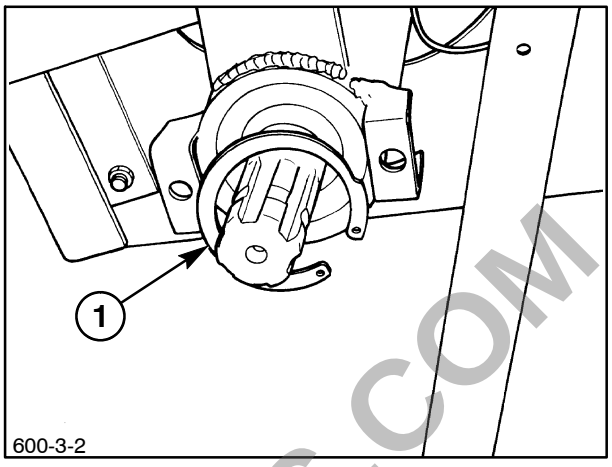


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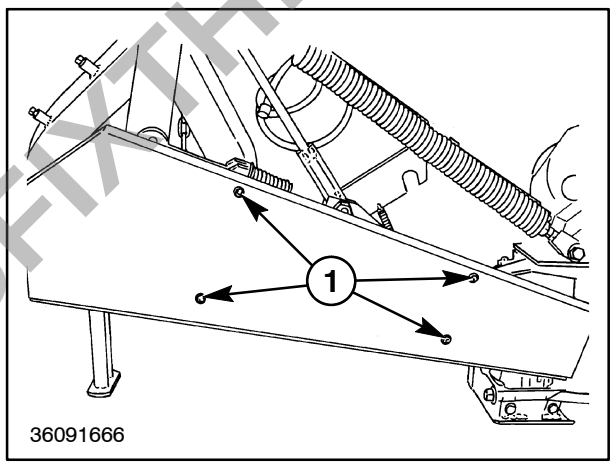
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3. Remove the snap ring, 1, retaining the front jackshaft bearing.



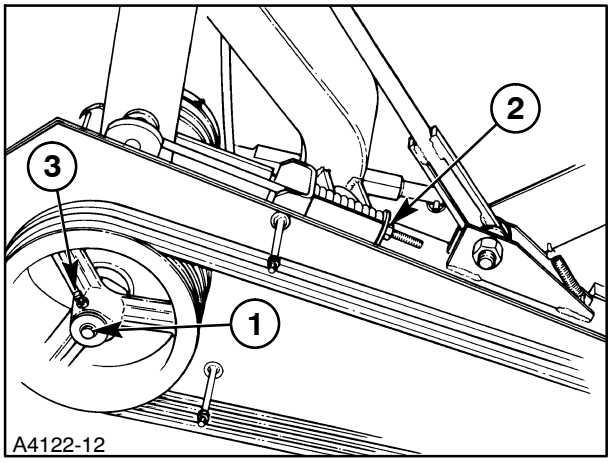
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4. Remove the rear belt drive shielding by removing the four locknuts, 1, and flat washers, and lift the shield off.



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5. Block the cutter bar by installing a block between the discs, and remove the cap screw, 1, and washer on the end of the jackshaft.
6. Loosen the belt tensioner, 2, until the belt can be removed from the drive sheave.
7. Loosen the two jamnuts and setscrews, 3, that retain the drive sheave to the jackshaft.



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CUTTER BAR

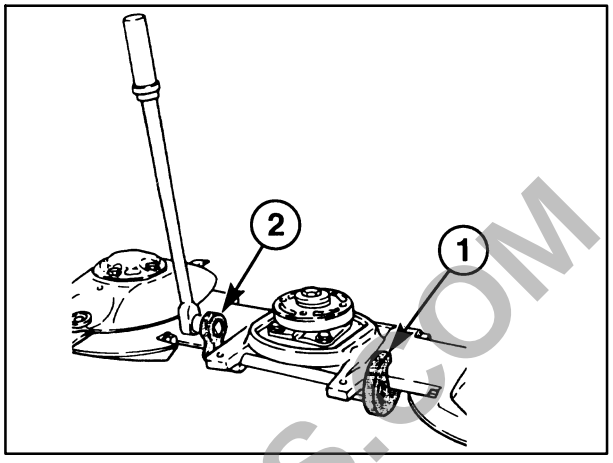
Disassembly

1. Remove the disc, rock guard and skid shoe from the module to be removed in order to gain access to the tie bolts. Loosen the tie bolts by installing the holding tools #FNH01221-2, 1, on one end of each tie bolt. Use wrench #FNH01221-3, 2, with a 3/4 inch breaker bar to loosen the front and rear nuts alternately a flat at a time until nuts can be turned freely by hand.

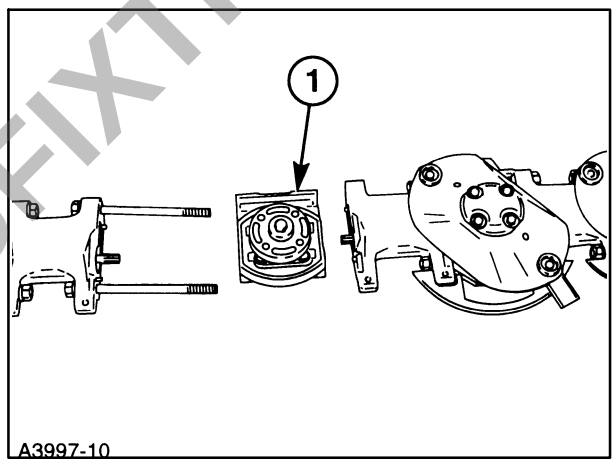
NOTICE: *Do not loosen one nut completely as this will cause cutter bar to bow and may cause failure of the opposite tie bolt.*

NOTICE: *The tie bolts will be easier to loosen if the disc mower is mounted to a tractor. If not mounted, it may be necessary to secure the cutter bar in some manner prior to attempting to loosen the tie bolts, to prevent tipping the mower off its jackstand.*

2. Slide the cutter bar apart far enough to allow removal of the disc module, 1.



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