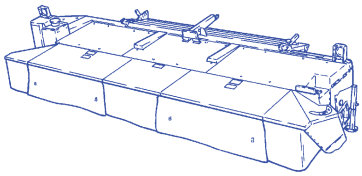


NEW HOLLAND
750HD
770HD

SERVICE MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

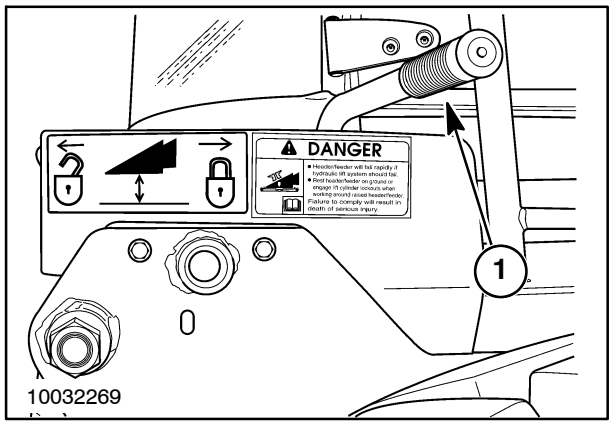
84207373 3/09
1st Printing

5. Start the tractor, raise the arms up to the maximum raised position and engage the header lock by pulling rearward on the handle. The header lock, 1, is located on the left front corner of the windrower. The handle is shown here in the locked position.

⚠ WARNING ⚠

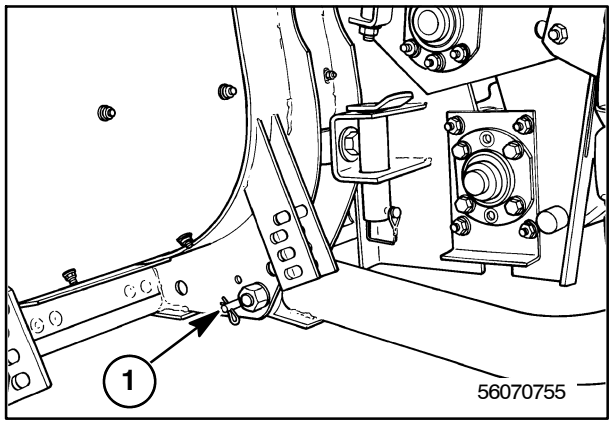
Always engage header lift lock rods or channels when working around or under a raised header and when transporting machine on a public road. Failure to comply could result in death or serious injury.

DMC002



9

6. Install the header lift arm pins, 1.



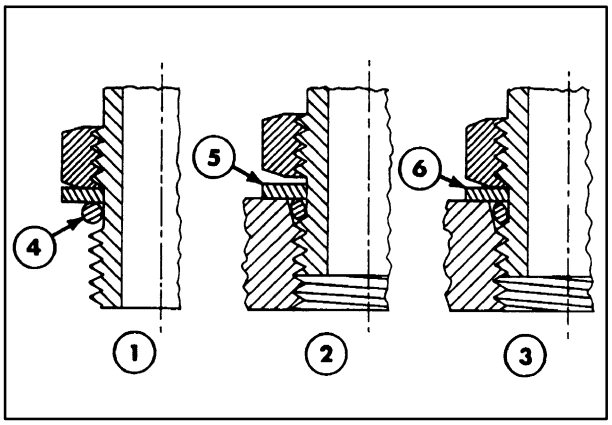
10

INSTALLATION OF ADJUSTABLE FITTINGS IN STRAIGHT THREAD O-RING BOSSES

1. Lubricate the O-ring by coating it with a light oil or petroleum. Install the O-ring in the groove adjacent to the metal backup washer which is assembled at the extreme end of the groove, 4.
2. Install the fitting into the SAE straight thread boss until the metal backup washer contacts the face of the boss, 5.

NOTE: *Do not over tighten and distort the metal backup washer.*

3. Position the fitting by turning out (counter-clockwise) up to a maximum of one turn. Holding the pad of the fitting with a wrench, tighten the locknut and washer against the face of the boss, 6.



22

STANDARD TORQUE DATA FOR HYDRAULIC TUBES AND FITTINGS

TUBE NUTS FOR 37° FLARED FITTINGS								O-RING BOSS PLUGS ADJUSTABLE FITTING LOCKNUTS, SWIVEL JIC - 37° SEATS			
				TORQUE				TORQUE			
SIZE	TUBING OD		THREAD SIZE	POUNDS FOOT		NEWTON METERS		POUNDS FOOT		NEWTON METERS	
	In.	mm		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
4	1/4	6.4	7/16-20	9	12	12	16	6	10	8	14
5	5/16	7.9	1/2-20	12	15	16	20	10	15	14	20
6	3/8	9.5	9/16-18	21	24	29	33	15	20	20	27
8	1/2	12.7	3/4-18	35	40	47	54	25	30	34	41
10	5/8	15.9	7/8-14	53	53	72	79	35	40	47	54
12	3/4	19.1	1-1/16-12	77	82	104	111	60	70	81	95
14	7/8	22.2	1-3/16-12	90	100	122	136	70	80	95	109
16	1	25.4	1-5/16-12	110	120	149	163	80	90	108	122
20	1-1/4	31.8	1-5/8-12	140	150	190	204	95	115	129	158
24	1-1/2	38.1	1-7/8-12	160	175	217	237	120	140	163	190
32	2	50.8	2-1/2-12	225	240	305	325	250	300	339	407

These torques are not recommended for tubes of 1/2 inch (12.7 mm) OD and larger with wall thickness of 0.035 inch (0.889 mm) or less. The torque is specified for 0.035 inch (0.889 mm) wall tubes on each application individually.

Before installing and torquing 37° flared fittings, clean the face of the flare and threads with a clean solvent or Loctite cleaner and apply hydraulic sealant Loctite™ no. 569 to the 37° flare and the threads.

Install fitting and torque to specified torque, loosen fitting and retorque to specifications.

CONDITIONER ROLLS

Unplugging the Conditioner Rolls

If the auger or conditioner rolls become clogged, wrapped with crop, or if a foreign object becomes lodged in the header, the header drive will stall to protect the driveline. The windrower has the feature of reversing the header drive when the conditioner rolls become clogged.

To free the clog:

1. Stop forward movement of the windrower and turn off the header drive switch.
2. Raise the header and back the windrower away from the standing crop. Reduce engine speed to approximately 1500 - 1800 rpm.
3. Engage the header reverse by lifting the cover on the switch and moving the switch to the left. The header will operate in the reverse direction for approximately three seconds. If the clog does not clear, move the switch from on to off and on again. Each application of the switch in this manner runs the header in reverse for three seconds.
4. Engage the parking brake, turn off the engine and engage the header lift locks.
5. If a foreign object caused the plugging, remove it from the header. If crop wrapping or bunching caused the problem, relieve the roll pressure.

⚠ CAUTION ⚠

Do not attempt to unplug conditioner rolls without first relieving roll pressure. Roll pressure could cause top conditioner roll to move downward suddenly and cause personal injury. Failure to comply may result in minor or moderate injury.

M1445

6. Start the windrower, and with the engine running at about 1500 - 1800 rpm, engage the header drive. If the slug clears, readjust roll pressure and continue operations.
7. If the header is still plugged, repeat steps 3 through 6. Perform steps 8 and 9 to clear the header.
8. Clean off the cutter bar and the area under the auger. Pull as much material as possible from in front of and behind the conditioner rolls. If necessary, restart the unit and operate the header in reverse until the plugging is cleared. Make sure there are no foreign objects lodged between the auger and the conditioner rolls.
9. Start the unit, and with the engine at 1500 - 1800 rpm, engage the header drive. If the slug clears readjust roll pressure and continue. If the header is still plugged, repeat the preceding steps.

If header clogging continues, check the following:

1. Header speed.
2. Condition of cutter bar components.
3. Conditioner roll pressure and gap.
4. Conditioner belt tension.
5. Swath gate and windrow shield adjustments.
6. Skid shoe and header tilt positions.
7. Header flotation.

Make sure there are no foreign objects in the conditioner. Restart the windrower and slowly run the header. After the conditioner rolls clear, stop the header and reapply the roll pressure.

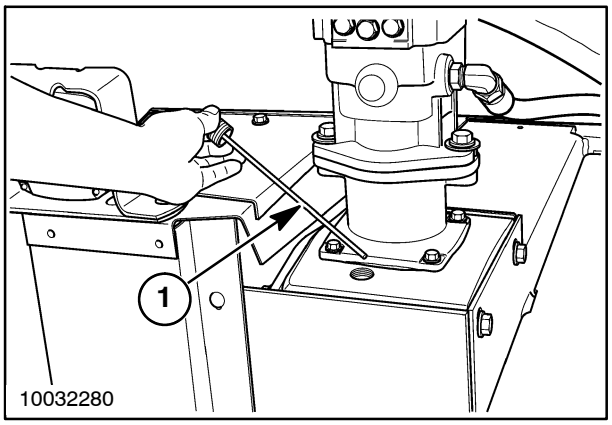
⚠ WARNING ⚠

Do not operate disc mower-conditioner without all cutter bar shields down, cover skirts installed, snapped together and in good condition. Failure to follow these instructions may lead to personal injury.

DMC001

3. Remove the dip stick and observe the oil level. The oil level is correct when it is anywhere within the marked area at the end, 1, of the dip stick. If no oil is present on the dip stick, add oil through the dip stick hole as required.

   Maintain oil level using New Holland Ambra Hypoide 90 Gear Oil, or New Holland Ambra Hypoide SSL Gear Oil.

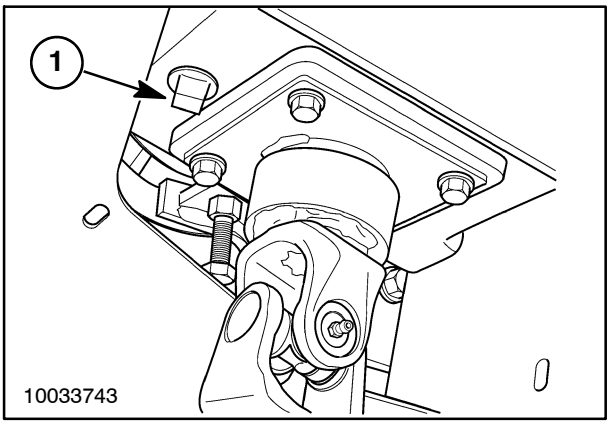


10

The header drive gearbox oil should be changed every 200 hours or yearly, which ever occurs first. Position a pan under the gearbox, and drain oil by removing plug, 1, on the bottom of the gearbox. Dispose of the used oil properly.

Apply sealant to the threads of the drain plug before reinstalling in the gearbox. The gearbox holds approximately 2500 ml (85 oz).

Maintain oil level using New Holland Ambra Hypoide 90 Gear Oil, or New Holland Ambra Hypoide SSL Gear Oil.



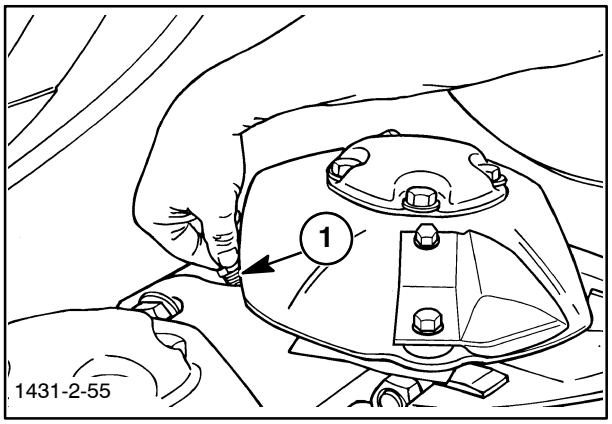
11

CUTTER BAR MODULES

Cutter bar module oil should be checked every 50 hours. All twelve modules must be checked.

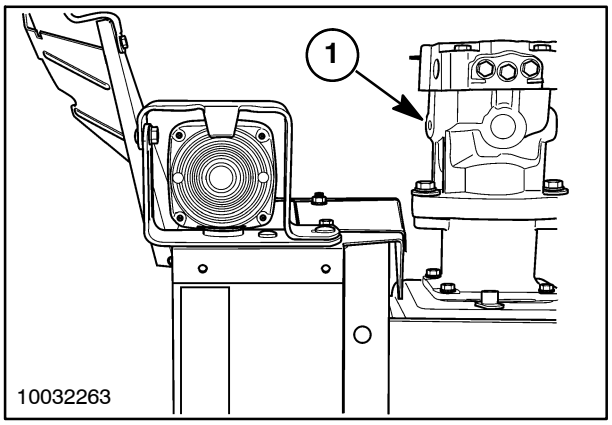
NOTE: *The header must be level front to back and side to side. Position the machine on a level surface, with the header locks engaged, fully extend the tilt cylinder to level the header.*

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



12

On the right side, the motor, 1, is coupled to a vertical shaft in the bevel gearbox. The shaft protrudes from the bottom of the gearbox and into the cutter disc drive shaft yoke. The bevel gearbox, by means of a side shaft, drives the belt assembly. The cutter discs rotate in opposite directions across the cutter bar.

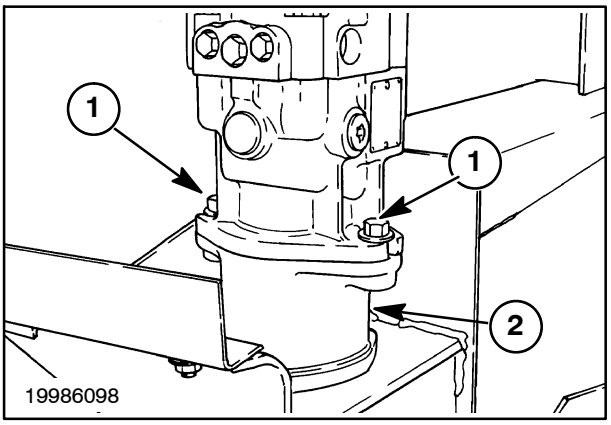


3

LEFT SIDE MOTOR AND COUPLING

Removal

1. Remove the two cap screws holding the motor, 1, to the coupling assembly housing, 2.
2. Lift the motor straight up to pull the shaft out of the coupling.
3. Remove the coupler from the splined shaft.
4. Remove the coupling assembly by removing two cap screws that secure the assembly to the header frame.

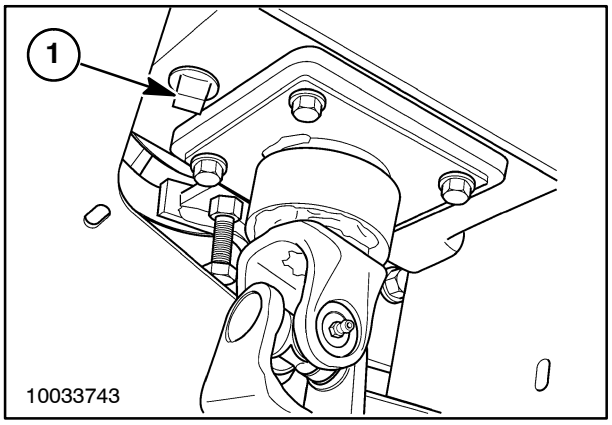


4

RIGHT SIDE MOTOR

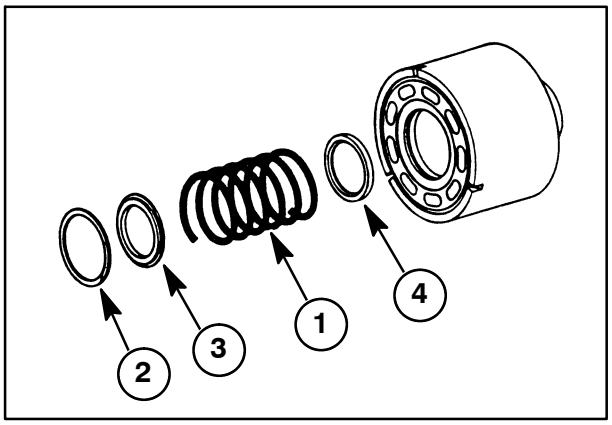
Removal

1. Remove the plug, 1, on the bottom of the bevel gearbox and drain the oil. Because the bottom seal on the gearbox may be disturbed when the motor is removed, failure to drain the oil may cause a leak.



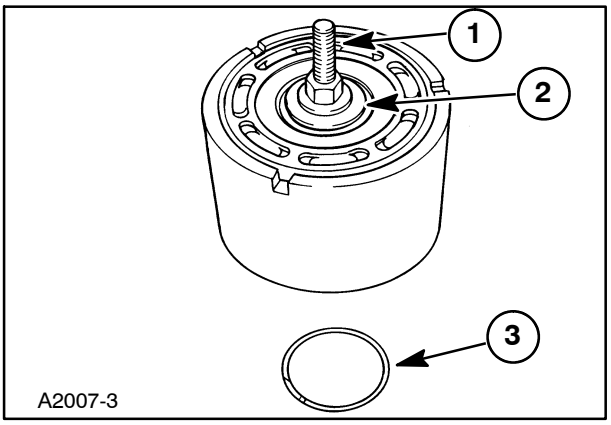
5

7. Compress the cylinder block spring, 1, and remove the spiral retaining ring, 2, outer washer, 3, spring, 1, and inner washer, 4.



9

If necessary, make a compression tool, 1, from a 3/8 inch x 4-1/2 inch cap screw and flat washers on each end to compress the spring. Flat washer, 2, must be small enough to allow retaining ring, 3, to be removed from the piston block. Reassemble in the reverse order.



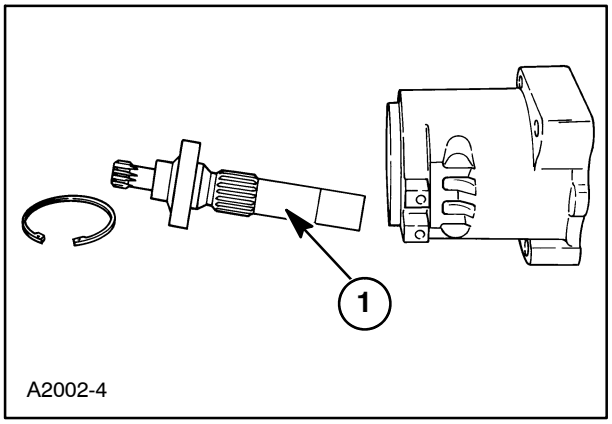
10

Assembly

1. Clean and lightly oil parts prior to assembly of the motor. Tighten all threaded parts to recommended torque levels.

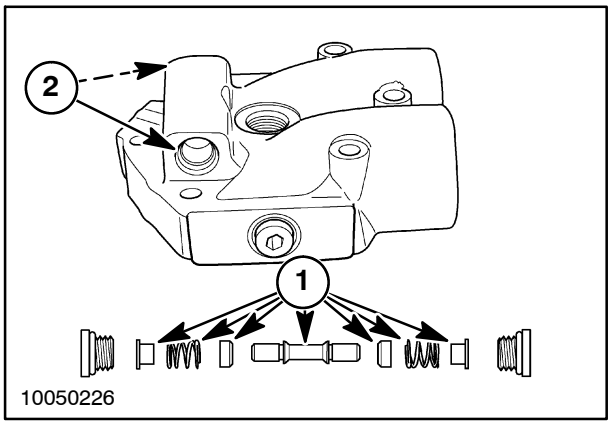
IMPORTANT: *Most parts have critical, high tolerance surfaces. Use caution to prevent damage to these surfaces during assembly. Protect exposed surfaces, openings, and ports from damage and foreign material.*

2. Using caution to not damage the sealing surface, install the first retaining ring onto the shaft and press on the ball bearing.
3. Install the second retaining ring.
4. Install the shaft and bearing assembly, 1, into the housing. Install the bearing retaining ring.



11

4. Inspect the poppet components shown, 1, for wear and replace as needed.
5. Inspect the mating surfaces, 2, wear and/or cracks and replace as needed.

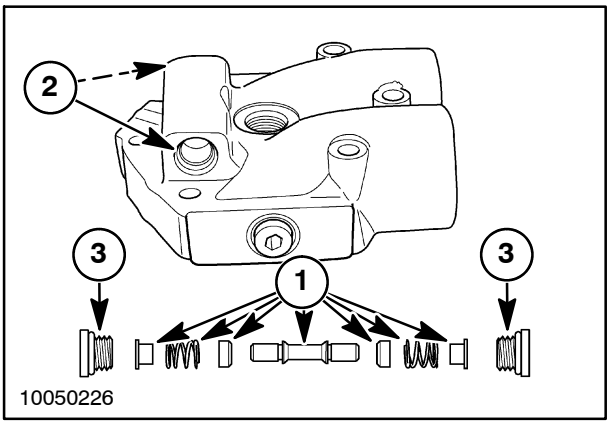


12

Assembly

1. Assembly the poppet components, 1, in order shown in the back plate, 2.
2. Install new O-rings on end plugs, 3, and secure at location, 2.

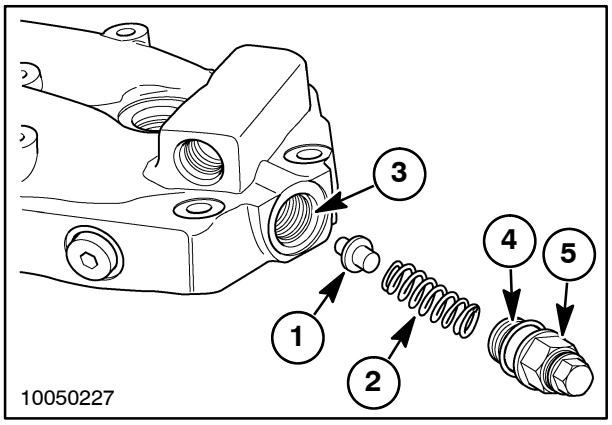
IMPORTANT: *When assembling the poppet components and replacing the O-rings, use New Holland Ambra Multi G 134 Hydraulic Oil during assembly.*



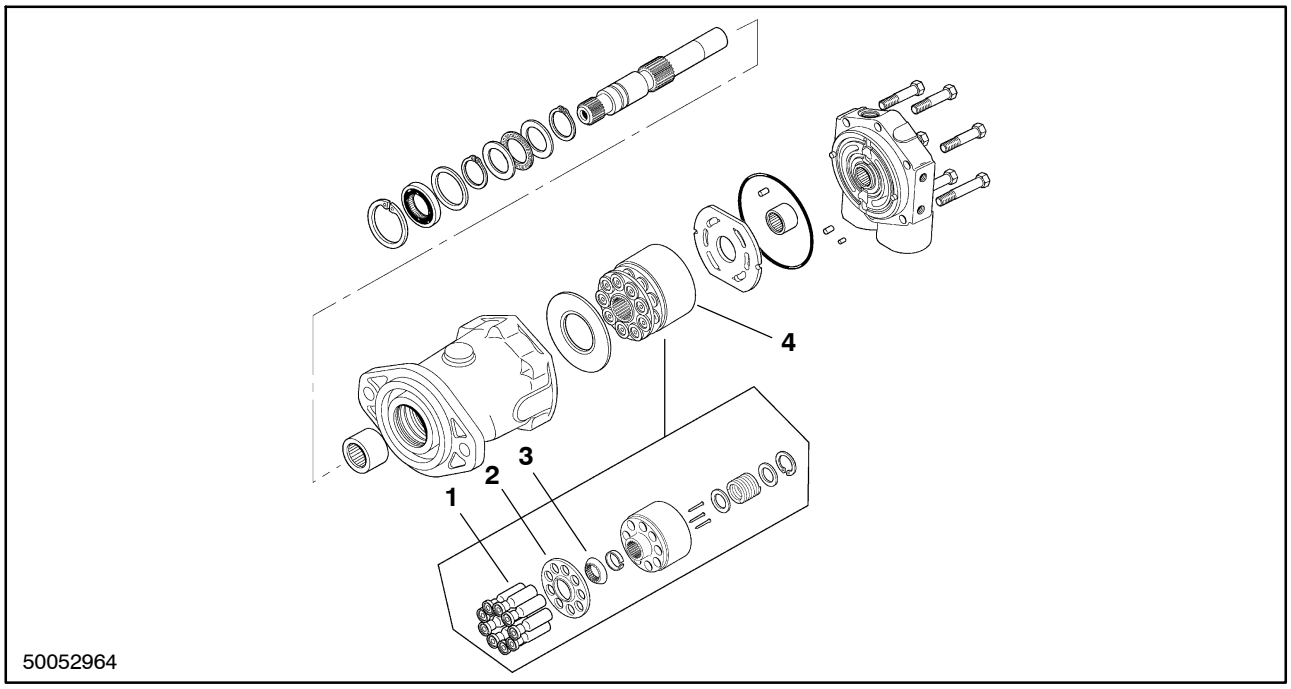
13

3. Install seat, 1, and spring, 2, into the cavity, 3.
4. Replace O-ring, 4, on plug, 5, and secure in cavity, 3.

IMPORTANT: *When replacing O-rings, use New Holland Ambra Multi G 134 Hydraulic Oil.*



14

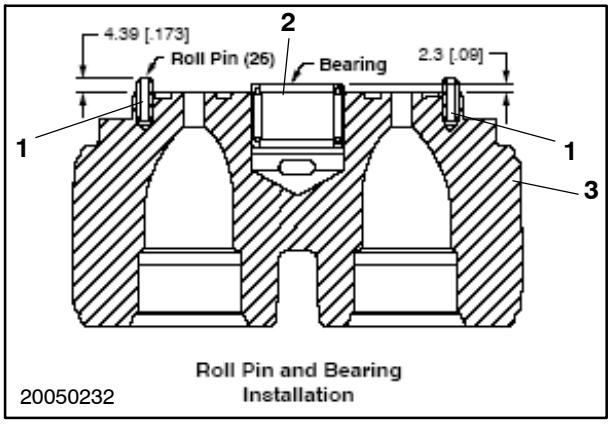


33

15. Install pivot, 1, spider, 2, and piston assembly, 3, on the piston block.
16. Install rotating assembly, 4, into housing assembly over shaft.

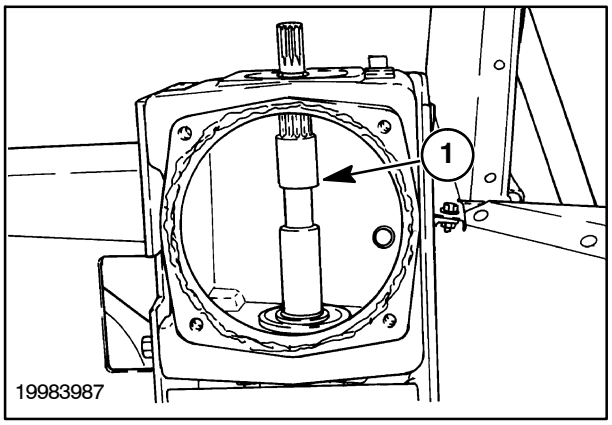
IMPORTANT: *The piston shoes must make contact with the cam plate insert. Be sure all parts are in their proper position before proceeding to the next step.*

17. If roll pins, 1, were removed, install to dimension shown and with opening of roll pin oriented away from bearing with 5° of bearing center line.
18. Install new bearing, 2, (with numbers end facing up to valve plate), in back plate, 3, to dimension shown protruding from back plate.
19. Dimension shown are mm (in).



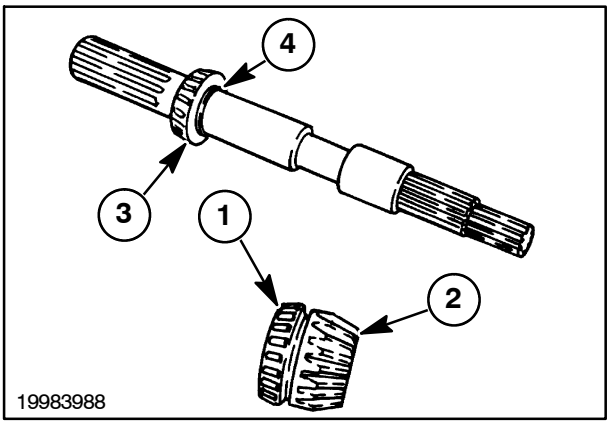
34

19. Lift the vertical shaft, 1, out of the housing.



15

The upper bearing, 1, and the pinion gear, 2, are splined to the shaft. The bearing is pressed onto the gear. The lower bearing, 3, is pressed onto the shaft and fits against stop ring, 4.

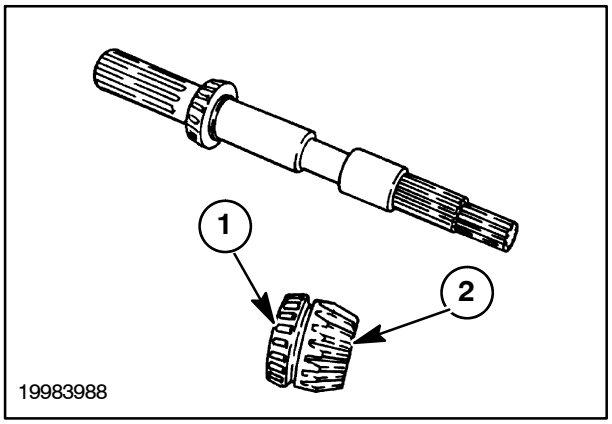


16

UPPER BEARING

Removal

1. Use a puller to remove the bearing, 1, from the pinion gear, 2. Press on the new bearing.



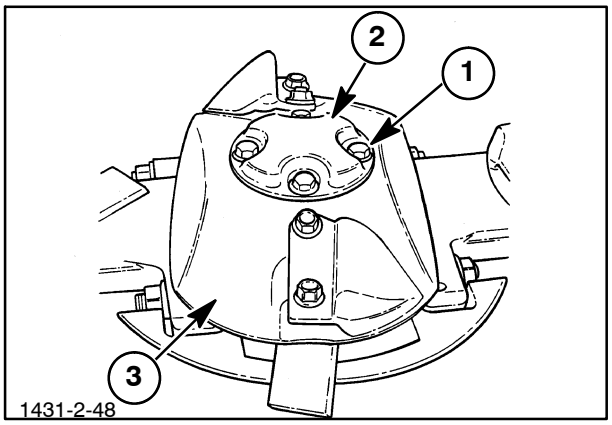
17

SECTION 58 - ATTACHMENTS/HEADERS

Chapter 2 - Cutter Bar

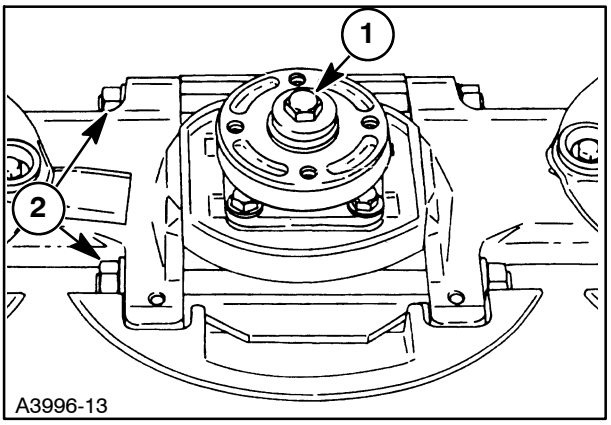
CONTENTS

2. Block the cutter bar discs in place with a bar through the end tower to lock the cutter bar. Remove the disc from the module to be serviced by removing the four retaining bolts, 1, securing the disc cover, 2, to the disc hub, 3.



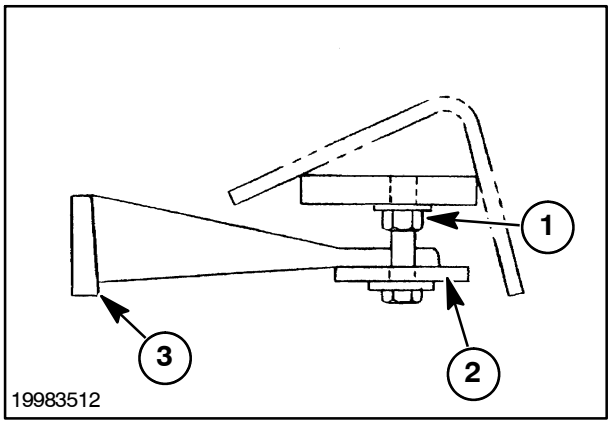
22

3. Clean any material adhering to the disc hub and top cap assembly. With the disc blocking still in place, loosen the disc hub retaining bolt, 1.
4. Remove the rock guard and skid shoe from the module to be serviced. Loosen the tie bolts, 2, by installing the holding tools (special tool #FNH01221-2) on one end of each tie bolt. Use wrench (special tool #FNH01221-3) with a 3/4 inch breaker bar to loosen the tie bolts 1/2 turn total by turning the front and rear nuts alternating one flat at a time.

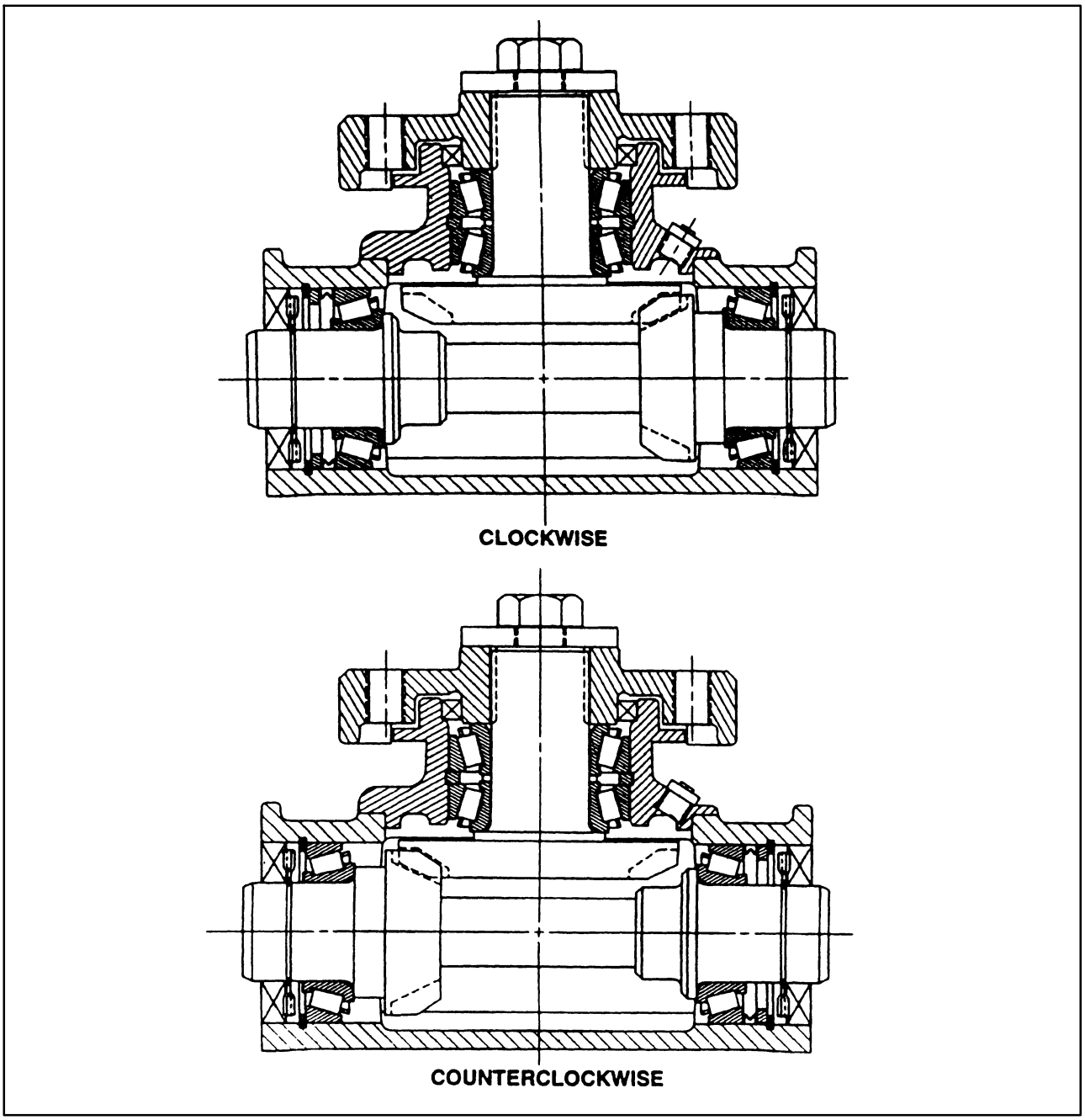


23

5. Place a floor jack under the center of the cutter bar. Raise the cutter bar just enough to release pressure on the cutter bar stops. Loosen the jam nuts, 1, and remove the plates, 2, under the stops, 3, installed on modules #1, #6, #7 and #12.



24



50

Assembly

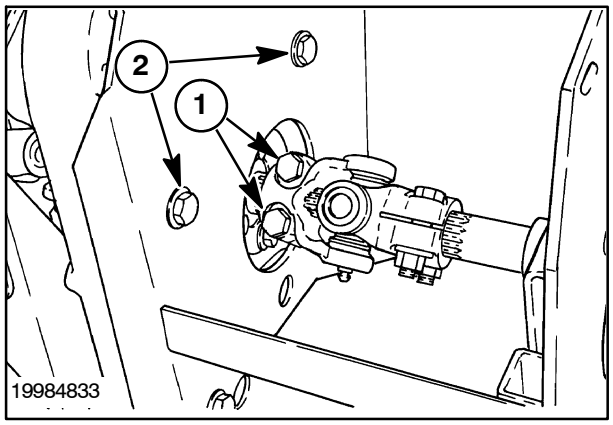
A disc module can be assembled for either clockwise or counter-clockwise rotation of the disc. Before assembling a disc module it must be determined in what position the disc will be mounted on the bar. When looking at a module from the rear, a counter-clockwise module will have the pinion gear on the left side. A clockwise module will have the gear on the right. The direction of rotation of an assembled module can be determined by looking at the ends of the lower module shaft. The pinion end of the shaft has a shallow groove in it.

SECTION 58 - ATTACHMENTS/HEADERS

Chapter 4 - Auger and Auger Drive

CONTENTS

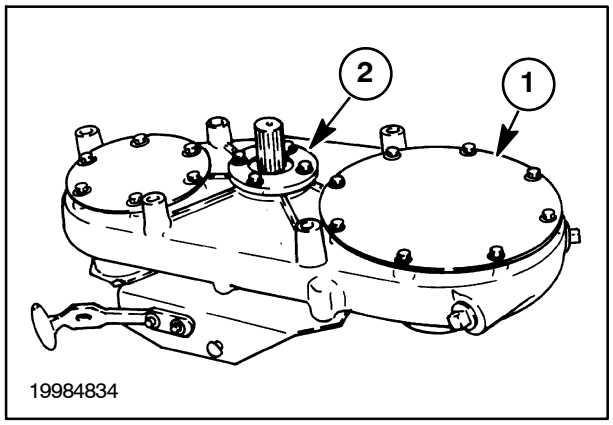
4. Remove the two bolts and nuts from the U-joint clamp on the gearbox input shaft.
5. Support the gearbox with a hoist. Remove the five bolts, 2, holding the gearbox to the frame. Shift the gearbox to slide it off the drive shaft and lower it to the floor.



4

Disassembly

1. Remove the cap screws, cover, 1, and the bearing end cap, 2.

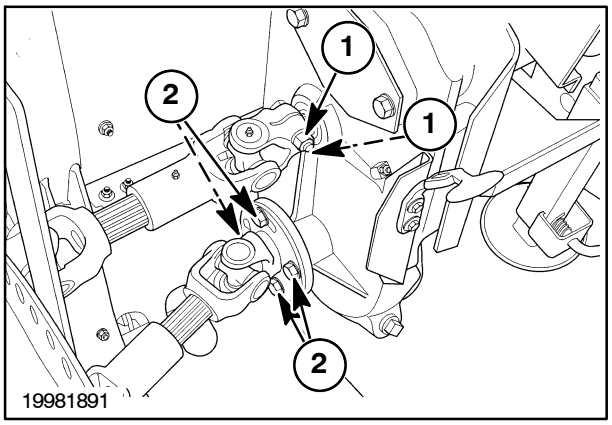


5

Installation

To install the lower drive shaft:

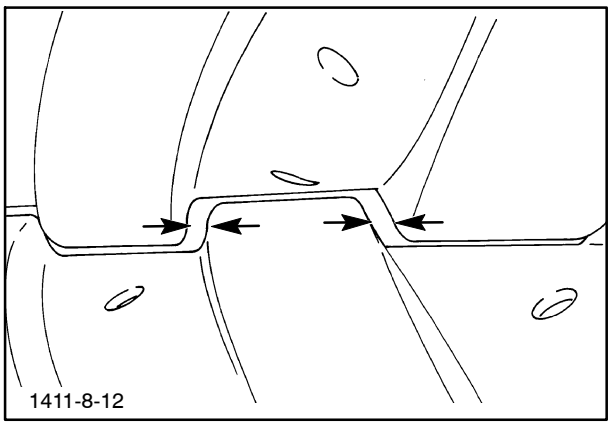
1. Before installing the lower drive shaft, rotate the machine by hand until the upper roll is positioned with the grease fittings on the drive shaft facing to the rear. Slide the clamp yoke over the lower conditioner roll shaft with the grease fittings facing the rear also.
2. Attach the timing flange to the gearbox shaft using four cap screws and washers. Leave the screws loose.
3. Install the two clamp bolts, 1, and nuts and torque to 113 N·m (83 lb ft).



9

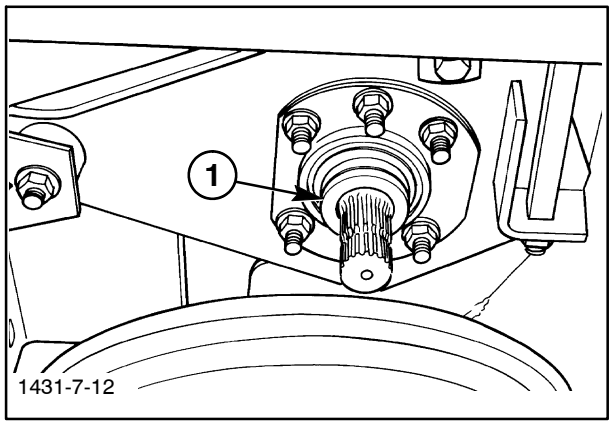
Reset the timing of the lower conditioner roll to the upper roll as follows:

1. Center the bottom roll lug in the upper roll gap while applying hand force to the upper roll opposite to the direction of normal rotation.
2. Tighten the four cap screws, 2, between the lower drive shaft yoke and the gearbox shaft.
3. Recheck the timing by applying reverse rotational force on both rolls.

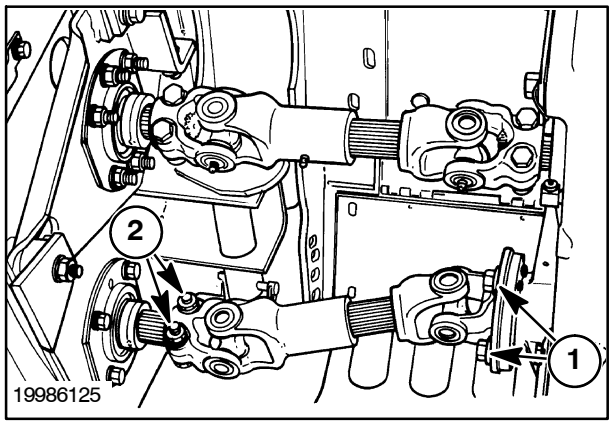


10

8. On the right side, install the lock collar, 1, onto the shaft and seat it over the bearing flange. Tighten the lock collar in the direction of rotation using a hammer and punch. Tighten the set screw to secure the lock collar.

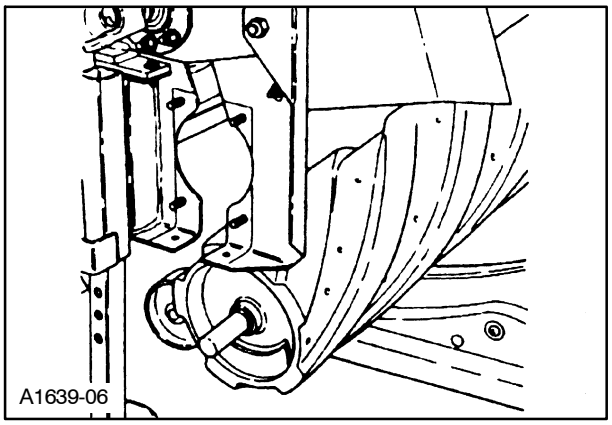


19



20

10. Using the floor jack to support the conditioner roll, lower the left end of the roll out of the header through the slot in the conditioner frame. When the roll is clear of the frame, move the roll slightly to the side and so that the right side shaft comes out of the hole in the frame. Then lower the roll to the ground.



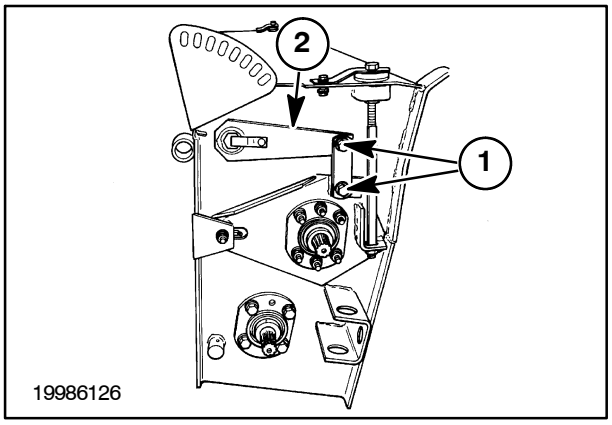
47

UPPER CONDITIONER ROLL H8060/750HD, H8080/750HD, H8080/770HD

Removal

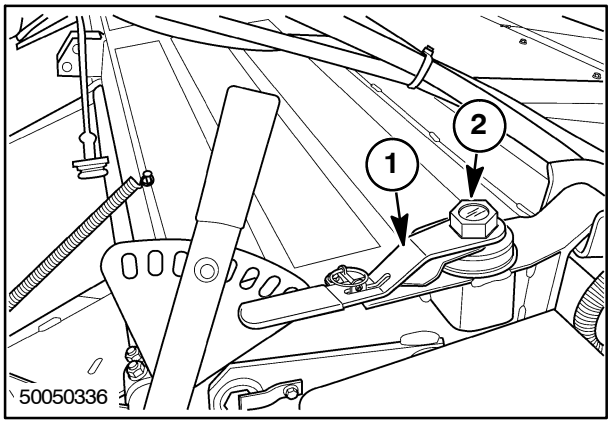
***NOTE**: The lower conditioner roll must be removed before the upper conditional roll can be removed. Refer to "LOWER CONDITIONER ROLL REMOVAL" on previous pages.*

1. Remove the nut, 1, on the roll gap bolt.



48

2. Raise the lock plate, 1, and swing it out to the side. Lift the adjusting nut, 2, and bolt out of the header.

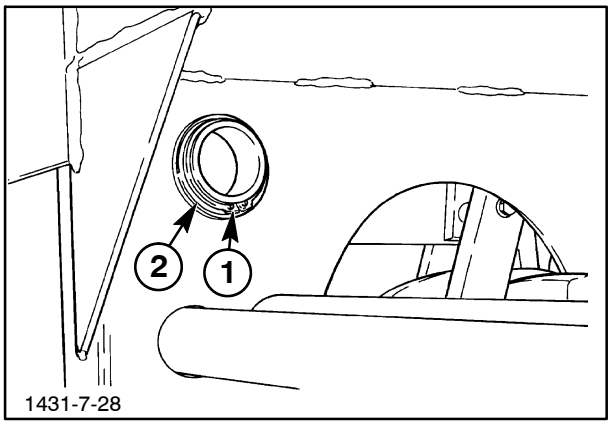


49

LEFT SIDE TORSION ARM AND BAR

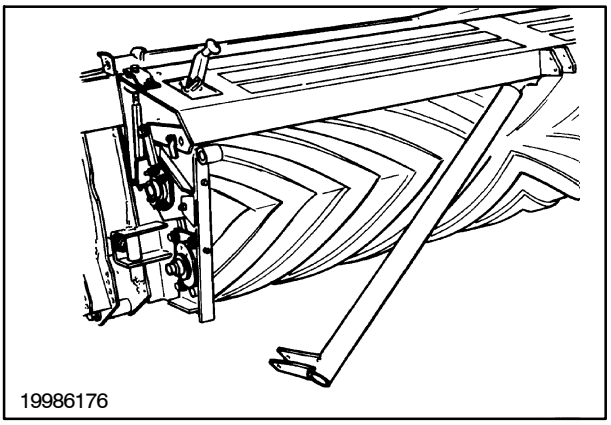
Reassembly

1. Insert the torsion arm on the left side and secure with a snap ring, 1, inside the frame. Replace the bushing, 2, if damaged or worn.



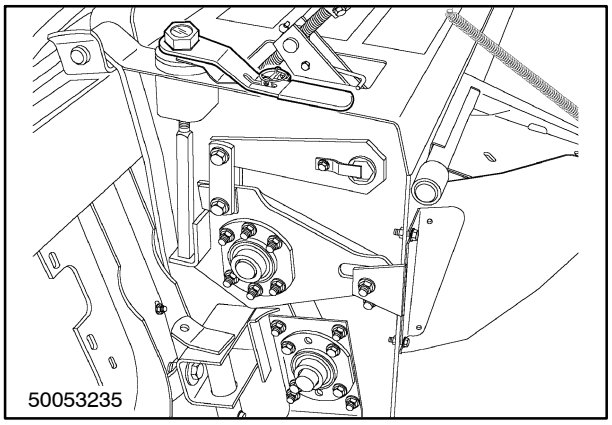
15

2. Place the two spacers on the end of the torsion bar tube. Lift the tube and insert the small diameter end into the bracket on the conditioner frame. Turn the tube so that the adjusting crank bracket is in the proper position to attach the crank. Slide the tube to the left over the hub on the frame.



16

3. Slide the torsion bar into the tube from the right side until it stops from hitting the shoulder in the torsion arm hex opening. Slide the tube to the right off the hub and raise it slightly. While holding the tube to align the bar with the hole, have a helper push the bar through the tube until it enters the hex hole in the torsion arm. Slide the tube completely onto the hub. Drive the bar into the tube from the right until the end is flush with the outside of the torsion arm.



17

REPLACEMENT DISC KNIVES

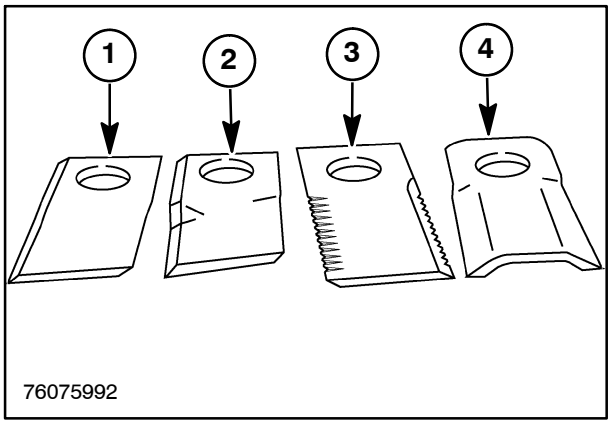
There are three different versions of disc knives available from your local authorized dealer that can be used on your disc auger header.

Your header is standard equipped with the 14 degree knife, 2, which use is suitable for a wide variety of crops and field conditions. This knife is formed with a 14 degree twist to aid in crop cutting and delivery to the auger.

The 14 degree knife, 2, assists in preventing streaking in light crop conditions and moving crop across the cutter bar. The cutting edge of the knife is closer to the ground to provide a cleaner cut and the added twist assists crop flow. This knife is more susceptible to rock damage than the 7 degree knife, 1.

The 14 degree knife is also available in a serrated version, 3. The serrated knife will last longer and is more aggressive. It works well in sudan and grass seed.

The “V” knife, 4, is available for areas where rocks are a problem. The shape of the knife provides added strength to resist bending. This knife is recommended for use only in rocky field conditions. It may not cut as cleanly as the 7 degree or 14 degree knives if the crop is thin or has small stems.



10