RD162, RD182 Disc Auger Headers

Service Manual

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SECTION 00 - GENERAL INFORMATION

Chapter 1 - General Information

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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.

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

MACHINE SAFETY

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

IMPORTANT: *The word "IMPORTANT" 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

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

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SPECIFICATIONS

RD162 DISC AUGER HEADER

Overall Width . . . . . 4836 mm (15 ft 9-1/4 in)

Weight (including container) . . . . . 1864 kg (4100 lb)

Header Drive . . . . . Hydraulic, variable flow - Forward - 345 bar (5000 psi)
Hydraulic, variable flow - Reverse - 400 bar (5800 psi)

Header
- Flotation . . . . . Vertical & radial
- Cutting width . . . . . 4680 mm (15 ft 4-1/4 in)
- Transport Height to bottom of skid shoe with 18.4 x 26 tires . . . . . 686 mm (27 in)
- Transport Height to bottom of skid shoe with 23.1 x 26 tires . . . . . 754 mm (29.6 in)

Cutter Bar
- Type . . . . . Modular
- No. of discs . . . . . 12 counter-rotating
- Knives per disc 2
- Disc cutting diameter . . . . . 500 mm (19.7 in)
- Disc drive . . . . . Bevel gears in sealed modules
- Disc speed . . . . . Variable from approx. 1600 to 3100 rpm
- Cutting height with 18.4 x 26 tires . . . . . 21.6 - 66 mm (0.85 - 2.6 in)
- Cutting height with 23.1 x 26 tires . . . . . 20.3 - 55.8 mm (0.80 - 2.2 in)
- Cutter bar angle with 18.4 x 26 tires . . . . . Adjustable from -1° to -12° . . . . . hydraulically controlled
- Cutter bar angle with 23.1 x 26 tires . . . . . Adjustable from -2° to -13° . . . . . hydraulically controlled

Auger
- Type . . . . . Undershot, full floating
- Auger diameter . . . . . 508 mm (20 in)
- Auger floating range . . . . . 43.6 mm (1.7 in)
- Auger flighting . . . . . 127 mm (5 in)
- Auger speed . . . . . Variable with header speed

Conditioner
- Type . . . . . Intermeshing rolls, high-contact rolls.
- Drive . . . . . 4HB V-belt, enclosed gears with U-joint drives to upper and lower rolls.
- Roll type . . . . . Molded rubber with intermeshing chevron design, high-contact chevron.
- Roll length . . . . . 2591 mm (102 in)
- Roll diameter . . . . . 264 mm (10-3/8 in)
- Roll speed . . . . . Variable with header speed
- Roll pressure . . . . . Torsion bar, single crank adjustment
- Crop discharge . . . . . Adjustable from 2438 - 965 mm (96 - 38 in)

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MINIMUM HARDWARE TIGHTENING TORQUES

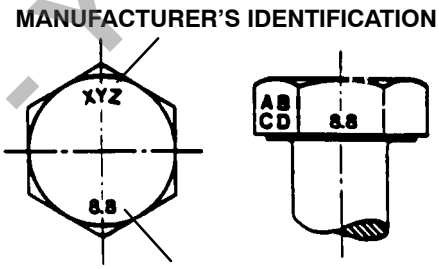
IN NEWTON-METERS (FOOT POUNDS) FOR NORMAL ASSEMBLY APPLICATIONS

METRIC NON-FLANGED HARDWARE AND LOCKNUTS

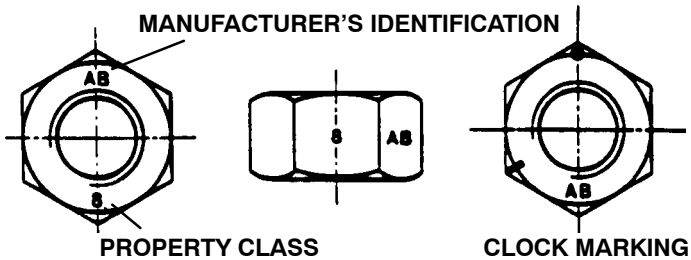
NOMINAL SIZE	CLASS 5.8		CLASS 8.8		CLASS 10.9		LOCKNUT CL.8 W/CL8.8 BOLT
	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	
M4	1.7 (15)*	2.2 (19)*	2.6 (23)*	3.4 (30)*	3.7 (33)*	4.8 (42)*	2.3 (20)*
M6	5.8 (51)*	7.6 (67)*	8.9 (79)*	12 (102)*	13 (115)*	17 (150)*	7.8 (69)*
M8	14 (124)*	18 (159)*	22 (195)*	28 (248)*	31 (274)*	40 (354)*	19 (169)*
M10	28 (21)	36 (27)	43 (32)	56 (41)	61 (45)	79 (58)	38 (28)
M12	49 (36)	63 (46)	75 (55)	97 (72)	107 (79)	138 (102)	66 (49)
M16	121 (89)	158 (117)	186 (137)	240 (177)	266 (196)	344 (254)	164 (121)
M20	237 (175)	307 (226)	375 (277)	485 (358)	519 (383)	671 (495)	330 (243)
M24	411 (303)	531 (392)	648 (478)	839 (619)	897 (662)	1160 (855)	572 (422)

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION
HEX CAP SCREW AND CARRIAGE BOLTS
CLASSES 5.6 AND UP



HEX NUTS AND LOCKNUTS
CLASSES 05 AND UP



86529681 REV F 5.1

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LUBRICATION AND SERVICE SCHEDULE

NOTE: *The items listed at the first 50 hours are very important. If they are not performed, it could cause early failures of components and severely lower the life expectancy of the header.*

DESCRIPTION	EVERY 10 HRS OR DAILY	AFTER FIRST 50 HRS	EVERY 50 HRS OR WEEKLY	EVERY 200 HRS
Oil auger drive chain	X			
Grease cutter bar pivot points	X			
Grease cutter bar drive shafts (3 fittings each side)	X			
Grease header drive idler pivot (1 fitting)	X			
Grease auger drive idler pivots (2 fittings)	X			
Grease conditioner drive shaft (1 fitting)	X			
Grease conditioner roll drive shafts (3 fittings each drive shaft)	X			
Grease upper conditioner roll arm pivots (1 fitting each side)	X			
Grease conditioner roll pressure crank (1 fitting)			X	
Oil all hinges and latches			X	
Check header drive gearbox oil level			X	
Check cutter bar module oil level (12 modules)			X	
Check conditioner drive gearbox oil level			X	
Change header drive gearbox oil		X		X
Change cutter bar module oil (12 modules)		X		X
Change conditioner drive gearbox oil		X		X

⚠ WARNING ⚠

Some illustrations in this manual show shields opened or removed to display areas being serviced. Replace all shields before operating the machine. Failure to comply could result in death or serious injury.

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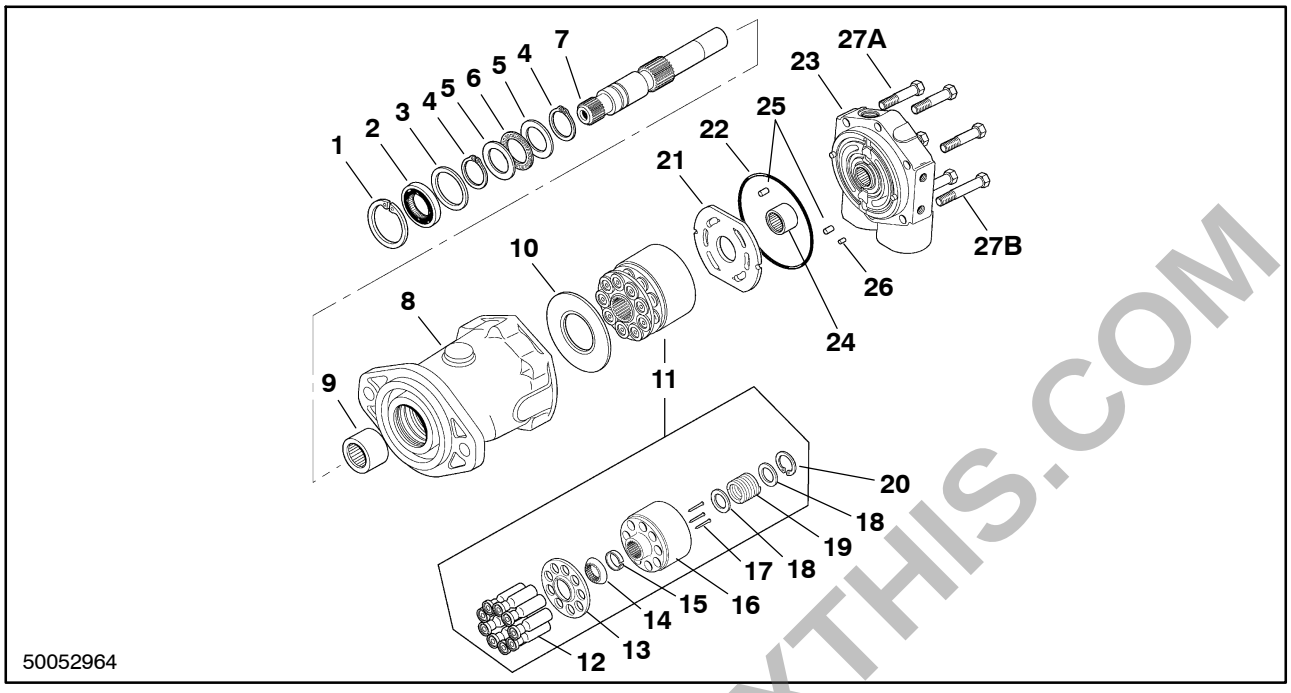
TROUBLESHOOTING

Charts

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.
Ragged or long stubble left.	Ground speed too fast. Dull, bent or broken knives. Knives installed wrong on discs. Header speed too slow. Cutting too high. Header flotation too light.	Reduce ground speed. Turn over or replace the knives. Install knives correctly on discs. Increase header speed. Remove high stubble kit, if installed. Increase header tilt. Increase the header flotation to keep the header in better ground contact.
Excessive knife breakage.	Cutting too low in stony conditions. Header flotation too heavy for stony fields. Ground speed too high in stony conditions.	Raise the cutting height with header tilt. Install high stubble kit. Adjust the flotation to float the header with 45.4 kg (100 lbs) force per side. Reduce ground speed.
Cutting not short enough in down material.	Ground speed too fast. Broken, bent or dull knives. Cutting height too high. Header speed too slow.	Reduce ground speed. Replace knives or turn knives over. Lower the cutting height by tilting the header. Increase header speed.
Strip of run-down uncut material.	Ground speed too fast. Crowding of uncut material. Missing or dull knives. Material buildup on cutter bar.	Reduce ground speed. Do not crowd uncut material. Replace or turn over knives. Clean off cutter bar. Tilt cutter bar back toward horizontal to reduce material buildup.

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Ref. #	Description	Qty.
1	Retaining Ring	1
2	Shaft Seal	1
3	Washer	1
4	Retaining ring	2
5	Thrust Race	2
6	Thrust Bearing	1
7	Drive Shaft	1
8	Housing Assembly (Includes #10)	1
9	Needle Bearing	1
10	Cam plate Insert	1
11	Rotating Group Assembly (Includes #12-20)	1
12	Piston Assembly	9
13	Spider	1
14	Spider Pivot	1
15	Pin Keeper	1

Ref. #	Description	Qty.
16	Piston Block	1
17	Pins	3
18	Washer	2
19	Spring	1
20	Retaining Ring	1
21	Valve Plate	1
22	O-ring, 2.38 mm x 101.6 mm (3/32 in x 4 in)	1
23	Back plate Assembly (includes #24-26)	1
24	Needle Bearing	1
25	Roll Pin	2
26	Roll Pin	1
27 A	Screw, Cap, HH, G5, 5/16 in - 18 x 2-5/16 in	3
27 B	Screw, Cap, HH, G5, 5/16 in - 18 x 2- 15/16 in	3

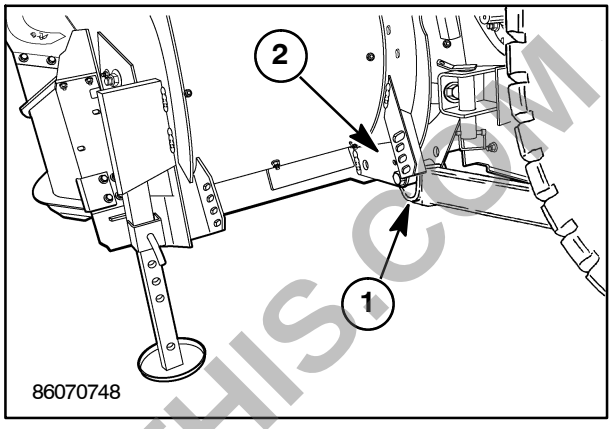
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HEADER
(WDX1902, WD1903/RD162, WDX2302, WD2303/RD162, WDX2302, WD2303/RD182)

Installation

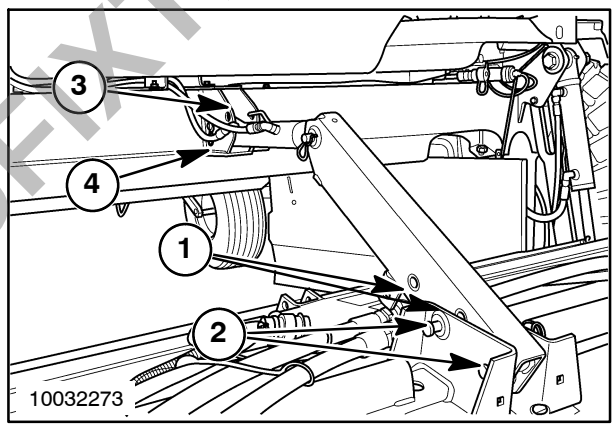
1. Lower the lift arms as much as possible. Apply a liberal coating of multi-purpose grease to the lift cups, 1.
2. Drive the tractor up to the header so the lifting cups on the lift arms are directly below the lift bushings, 2. Raise the lift arms until they are firmly in place. Raise the jack stands into the storage position.



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3. Remove the pin holding the header tilt cylinder in the storage position and connect it to the header using a clevis pin. On the RD182 header the cylinder only has one hole to connect to on the header. When the header tilt channel is installed in the rearward holes, 1, this provides a cutting range of 1-1/2 inch to 3 inch. When installed in the forward holes, 2, the cutting range is 1 inch to 2-1/4 inch. The forward holes on the tilt channel should be used for most crops.

***IMPORTANT**: Do not use this hole, 3, to store a pin while the header is attached. Damage to the tilt cylinder and base unit will result.*



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4. Retract the tilt cylinder or raise the header to cause the sliding link to move to the operating position. Install the retaining pin, 4. Connect the wire harness for the header speed sensor and flashers.

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FORWARD

Appropriate service methods and correct repair procedures are essential for the safe, reliable operation of all equipment, as well as the personal safety of the individual performing the repair.

This Service Manual provides troubleshooting and overhaul instructions using recommended procedures and equipment. Following these instructions will ensure the safe, efficient, and timely completion of the service or repair.

The manual is divided into sections which are subdivided into chapters. Each chapter contains information on general operating principals, detailed inspection, overhaul and, where applicable, specific troubleshooting, special tools, and specifications.

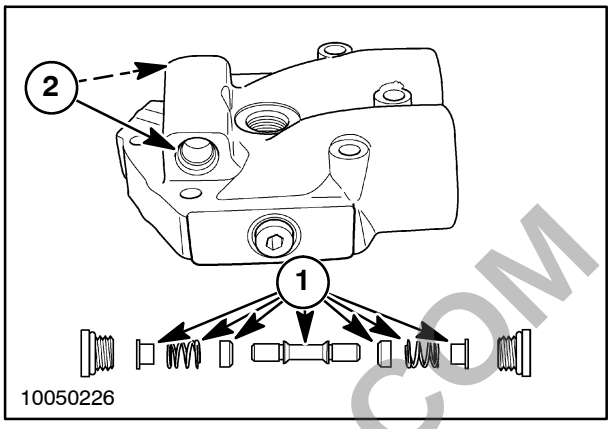
Any reference in this manual to right, left, rear, front, top, or bottom is determined by standing behind the machine and looking in the direction of travel.

All data and illustrations in this manual are subject to variations in build specification. This information was correct at the time of issue, but Case IH policy is one of continuous improvement, and the right to change specifications, equipment, or design at any time, without notice, is reserved.

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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.

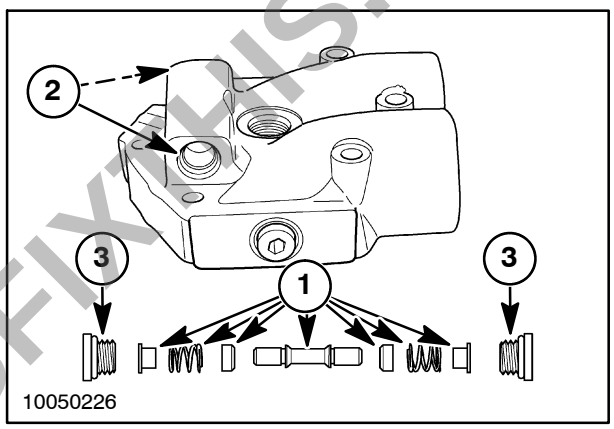


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Assembly

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.

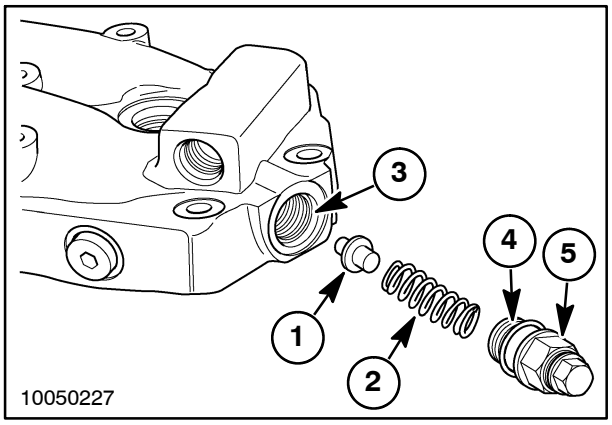
IMPORTANT: *When assembling the poppet components and replacing the O-rings, use Case Nexplore Hydraulic Oil during assembly.*



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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 Case Nexplore Hydraulic Oil.*

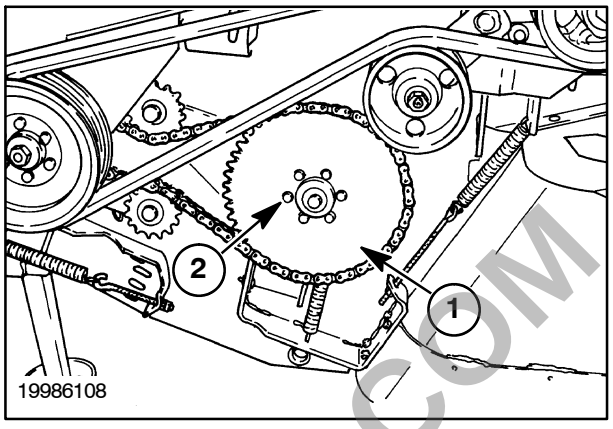


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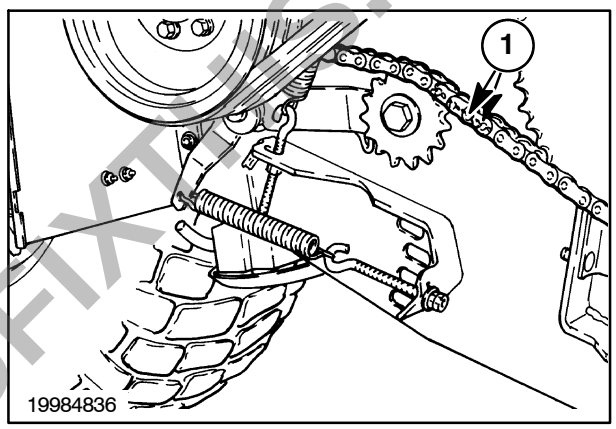
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9. Replace the chain sprocket, 1, on the end of the auger shaft. Secure with six cap screws, 2.



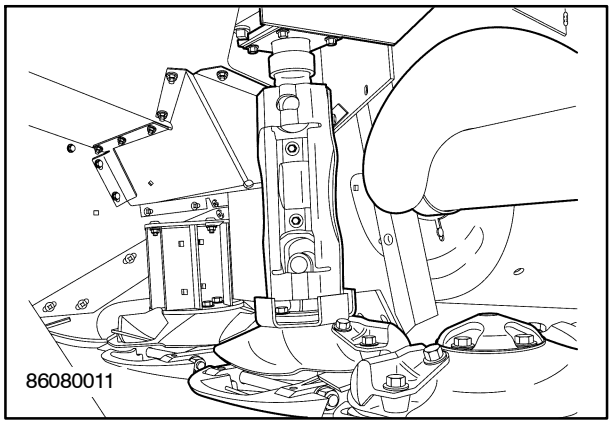
18

10. Replace the chain. Connect the chain ends with the connector link and secure with cotter pins, 1.



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11. Install the cutter bar. Refer to the “Cutter Bar Installation” chapter of this section for instructions for installing the cutter bar.



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