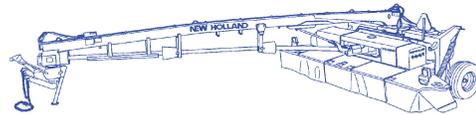


Product: New Holland 1441/1442 Pull-Type Mower Windrowers Service Repair Manual
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NEW HOLLAND

1441 1442

REPAIR MANUAL



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1441, 1442 REPAIR MANUAL CONTENTS

- SECTION 00 - GENERAL INFORMATION
- SECTION 31 - IMPLEMENT POWER TAKE-OFF (PTO)
- SECTION 35 - HYDRAULIC SYSTEM
- SECTION 39 - FRAMES/TONGUE AND HITCHES
- SECTION 55 - ELECTRICAL SYSTEM
- SECTION 58 - ATTACHMENTS/HEADERS
- SECTION 90 - DECALS

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books.

The sections listed above are the sections utilized for the 1441, 1442 Disc Mower-Conditioners.

COMPLETE CONTENTS

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Chapter 1 - General Information

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SECTION 00 - GENERAL INFORMATION

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	Standard Torque Data for Hydraulic Tubes and Fittings	9
	Pipe Thread Fitting Torque	10
	Installation of ORFS (O-ring Flat Faced) Fittings	10

SPECIAL TOOLS

Tool Number	Description/Use
Section 31	
NHO1386	Pivot tongue gearbox neck cap screws
610R	Snap ring remover
Local Manufacture	Neck lock nut removal
Local Manufacture	Holding tool for neck housing
Local Manufacture	Neck rolling torque measurement
Section 58	
FNH23ET95	Top cap bearing cover
FNH01221-2	Cutter bar tie bolt holding tool
FNH01221-3	Cutter bar wrench

SPECIFICATIONS

MODEL 1441

	Standard Tongue	Swivel Hitch Tongue
Overall Width		
Transport position	4826 mm (15'10")	4826 mm (15'10")
Field position	7137 mm (23'5")	7595 mm (24'11")
Overall Length		
Transport position	8966 mm (29'5")	9271 mm (30'5")
Field position	7366 mm (24'2")	7670 mm (25'2")
Height		
Transport position	2006 mm (6'7")	2006 mm (6'7")
Field position	1727 mm (5'8")	1727 mm (5'8")
Ground Clearance	508 mm (20")	508 mm (20")
Wheel Tread Width	3772 mm (148.5")	3772 mm (148.5")
Weight	2971 kg (6550 lbs.)	2971 kg (6550 lbs.)

SECTION 00 - GENERAL INFORMATION - CHAPTER 1

Driveline

Tractor Requirement 74 KW (100 HP) or greater with standard category 2 or 3 ASAE hitch and PTO locations. Two remote hydraulic circuits capable of 104 bar (1500 PSI).

Input Speed 1000 RPM only

Drive 1000 RPM PTO with slip clutch/overrunning clutch, enclosed gears and (3) HB banded belts with spring loaded idlers.

Header

Cutting Width 4699 mm (15'7")

Flotation Vertical & radial

Windrow Width 914 mm to 2438 mm (3' to 8')

Header Lift Hydraulic (master-slave system)

Cutter Bar

Type Modular

No. of Discs 8 counter-rotating, 4 co-rotating

Knives per Disc 2

Disc Cutting Diameter 500 mm (19.7")

Disc Drive Bevel gears in sealed modules

Disc Speed 3000 RPM

Cutting Height, Approximate 32 mm to 83 mm (1.25" to 3.25")

Cutting Bar Angle -2° to -10°

Conditioner

Type Intermeshing rolls

Drive 4HB V-belt, enclosed gears with u-joint drives to upper & lower rolls.

Rolls

Type Molded rubber with intermeshing chevron design.

Length 2591 mm (102")

Diameter 264 mm (10.38")

Speed 740 RPM

Operating Speed 0 to 14 KPH (0 to 9 MPH)

Transport Speed 32 KPH (20 MPH) maximum

Capacity 3.36 H/hr (8.97 A/hr) @ 10 KPH (6 MPH) & 80% field efficiency.

Tire 31.5 x 13.5L x 15, 6 ply tubeless agricultural rib implement tire

Tire Pressure 207 kPa or 2.07 bar (30 PSI).

Jack 2000 lb. capacity side-wind

Tongue Shift Hydraulic

SECTION 00 - GENERAL INFORMATION - CHAPTER 1

MODEL 1442

	Standard Tongue	Swivel Hitch Tongue
Overall Width		
Transport position	4826 mm (15'10")	4826 mm (15'10")
Field position	7137 mm (23'5")	7595 mm (24'11")
Overall Length		
Transport position	8966 mm (29'5")	9271 mm (30'5")
Field position	7366 mm (24'2")	7670 mm (25'2")
Height		
Transport position	2006 mm (6'7")	2006 mm (6'7")
Field position	1727 mm (5'8")	1727 mm (5'8")
Ground Clearance	508 mm (20")	508 mm (20")
Wheel Tread Width	3772 mm (148.5")	3772 mm (148.5")
Weight	2971 kg (6550 lbs.)	2971 kg (6550 lbs.)
Driveline		
Tractor Requirement	74 KW (100 HP) or greater with standard category 2 or 3 ASAE hitch and PTO locations. Two remote hydraulic circuits capable of 104 bar (1500 PSI).	
Input Speed	1000 RPM only	
Drive	1000 RPM PTO with slip clutch/overrunning clutch, enclosed gears and (3) HB banded belts with spring loaded idlers.	
Header		
Cutting Width	4750 mm (15'7")	
Flotation	Vertical & radial	
Windrow Width	914 mm to 2438 mm (3' to 8')	
Header Lift	Hydraulic (master-slave system)	
Cutter Bar		
Type	Modular	
No. of Discs	8 counter-rotating, 4 co-rotating	
Knives per Disc	2	
Disc Cutting Diameter	500 mm (19.7")	
Disc Drive	Bevel gears in sealed modules	
Disc Speed	3000 RPM	
Cutting Height, Approximate	32 mm to 83 mm (1.25" to 3.25")	
Cutting Bar Angle	-2° to -10°	
Conditioner		
Type	Flail	
Drive	4HB V-belt, enclosed gears with u-joint drives to rotor.	

SECTION 00 - GENERAL INFORMATION - CHAPTER 1

Rotor

Length 2591 mm (102")
Diameter 560 mm (22")
Speed 1011 RPM (726 RPM optional)

Operating Speed 0 to 14 KPH (0 to 9 MPH)

Transport Speed 32 KPH (20 MPH) maximum

Capacity 3.36 H/hr (8.97 A/hr) @ 10 KPH (6 MPH) &
80% field efficiency.

Tire 31.5 x 13.5L x 15, 6 ply tubeless agricultural
rib implement tire

Tire Pressure 207 kPa or 2.07 bar (30 PSI).

Jack 2000 lb. capacity side-wind

Tongue Shift Hydraulic

SECTION 00 - GENERAL INFORMATION - CHAPTER 1

LUBRICATION

Adequate lubrication and maintenance on a regular schedule is vital to maintaining your equipment. To ensure long service and efficient operation, follow the lubrication and maintenance schedules outlined in this manual. The use of proper fuels, oils, grease and filters, as well as keeping the systems clean, will also extend machine and component life.

IMPORTANT: Always use genuine **New Holland** replacement parts, oils and filters to ensure proper operation, filtration of engine and hydraulic systems. See your **New Holland** dealer for additional oil quantities.

RECOMMENDED LUBRICANTS AND COOLANTS

Lubricant	Location Used	Type and Description	Part Number	Quart or Liter	Gallon or Tube		
Oil	Engine and Pivot Points without Grease Fittings, Chains	SAE 30 API CF-2SJ	9613286	1Qt.			
		SAE 30 API CF-2SJ	9613289		2.5 Gal.		
		SAE 30 API CF-2SJ	9613366*	4 L			
		5W-30 API SG/CD	9673589DS	1 Qt.			
		5W-30 API SG/CD	9624590*	4 L			
		10W-30 API SG/CD	9613313	1 Qt.			
		10W-30 API SG/CD	9613314		2.5 Gal.		
		10W-30 API SG/CD	9673508DS		5 Gal.		
		10W-30 API SG/CD	9613358*	1 L			
		10W-30 API SG/CD	9613359*	4 L			
		15W-40 API CF-4	9613290	1 Qt.			
		15W-40 API CF-4	9673730DS		1 Gal.		
		15W-40 API CF-4	9613303		2.5 Gal.		
		15W-40 API CF-4	9613292		5 Gal.		
Coolant	Engine	ESE-M97B18-D, Ethylene Glycol New Holland Spec. Coolant Concentrate	FGCC2701DS		1 Gal.		
		Propylene Glycol Concentrate	FGCC2711DS		1 Gal.		
		Hydraulic Oil	Hydraulic System, Hydrostatic System Front Axle Oil	134D – ESN-M2C134-D New Holland Spec. Hydraulic oil	9624450		2.5 Gal.
				134D – ESN-M2C134-D	9624451		5 Gal.
Hydraulic Oil	Optional, Multi-Seasonal Use, Recommended for Low Temperatures	F200	86523625DS	1 Qt.			
		F200	86523626DS		5 Gal.		
		F200	86509446*	20 L			
Gear Oil	Gearboxes	80W90 EP Gear Oil API GL5	9613295	1 Qt.			
		80W90 EP Gear Oil API GL5	9613294		2.5 Gal.		
		80W90 EP Gear Oil API GL5	9613375*	5 L			
		85W140 EP Gear Oil API GL5	9613297	1 Qt.			
		85W140 EP Gear Oil API GL5	9613296		2.5 Gal.		
		85W140 EP Gear Oil API GL5	9613376*	4 L			
Grease	All Grease Fittings	Lithium base EP high temperature	9861804DS		Tube		
		Lithium base EP high temperature	9861804CDS*		Tube		
Brake Fluid		Mineral Based Oil	1QM6C34A or 86541699DS	1 Qt.			

* **NOTE:** Canada Part Numbers ONLY.

MINIMUM HARDWARE TIGHTENING TORQUES

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

INCH HARDWARE AND LOCKNUTS

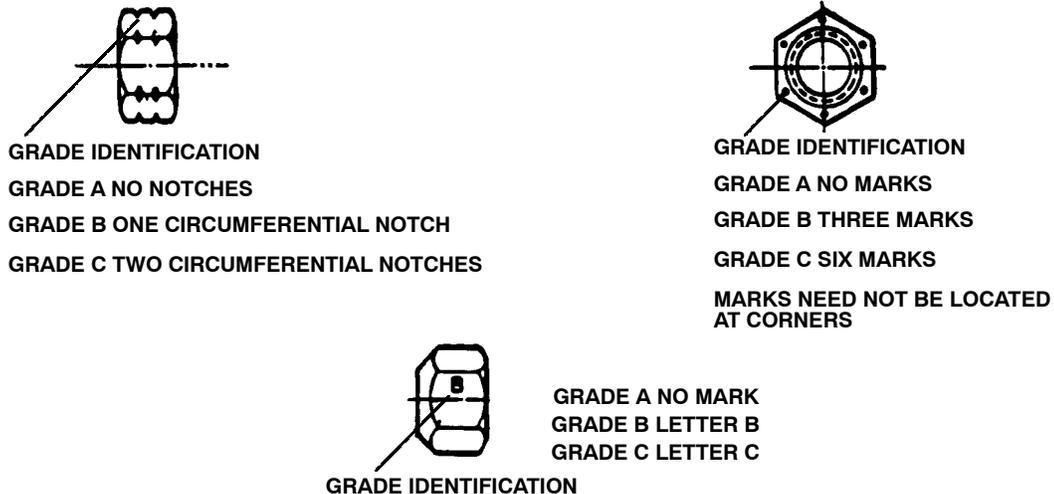
NOMINAL SIZE	SAE GRADE 2		SAE GRADE 5		SAE GRADE 8		LOCKNUTS		NOMINAL SIZE
	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	GR.B w/GR5 BOLT	GR.C w/GR8 BOLT	
1/4	55* (6.2)	72* (8.1)	86* (9.7)	112* (13)	121* (14)	157* (18)	61* (6.9)	86* (9.8)	1/4
5/16	115* (13)	149* (17)	178* (20)	229* (26)	250* (28)	324* (37)	125* (14)	176* (20)	5/16
3/8	17 (23)	22 (30)	26 (35)	34 (46)	37 (50)	48 (65)	19 (26)	26 (35)	3/8
7/16	27 (37)	35 (47)	42 (57)	54 (73)	59 (80)	77 (104)	30 (41)	42 (57)	7/16
1/2	42 (57)	54 (73)	64 (87)	83 (113)	91 (123)	117 (159)	45 (61)	64 (88)	1/2
9/16	60 (81)	77 (104)	92 (125)	120 (163)	130 (176)	169 (229)	65 (88)	92 (125)	9/16
5/8	83 (112)	107 (145)	128 (174)	165 (224)	180 (244)	233 (316)	90 (122)	127 (172)	5/8
3/4	146 (198)	189 (256)	226 (306)	293 (397)	319 (432)	413 (560)	160 (217)	226 (306)	3/4
7/8	142 (193)	183 (248)	365 (495)	473 (641)	515 (698)	667 (904)	258 (350)	364 (494)	7/8
1	213 (289)	275 (373)	547 (742)	708 (960)	773 (1048)	1000 (1356)	386 (523)	545 (739)	1

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION CAP SCREWS AND CARRIAGE BOLTS



LOCKNUTS



MINIMUM HARDWARE TIGHTENING TORQUES

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

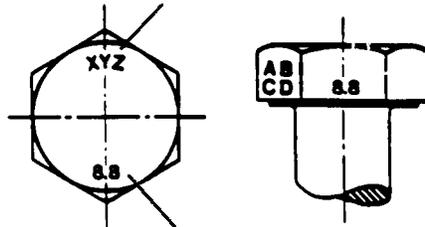
METRIC HARDWARE AND LOCKNUTS

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	15* (1.7)	19* (2.2)	23* (2.6)	30* (3.4)	33* (3.7)	42* (4.8)	16* (1.8)
M6	51* (5.8)	67* (7.6)	79* (8.9)	102* (12)	115* (13)	150* (17)	56* (6.3)
M8	124* (14)	159* (18)	195* (22)	248* (28)	274* (31)	354* (40)	133* (15)
M10	21 (28)	27 (36)	32 (43)	41 (56)	45 (61)	58 (79)	22 (30)
M12	36 (49)	46 (63)	55 (75)	72 (97)	79 (107)	102 (138)	39 (53)
M16	89 (121)	117 (158)	137 (186)	177 (240)	196 (266)	254 (344)	97 (131)
M20	175 (237)	226 (307)	277 (375)	358 (485)	383 (519)	495 (671)	195 (265)
M24	303 (411)	392 (531)	478 (648)	619 (839)	662 (897)	855 (1160)	338 (458)

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION HEX CAP SCREW AND CARRIAGE BOLTS CLASSES 5.6 AND UP

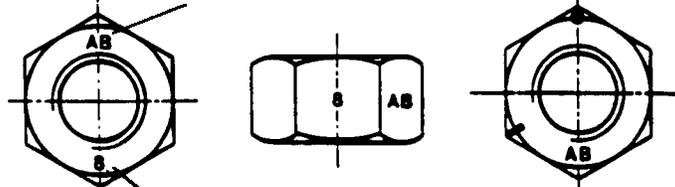
MANUFACTURER'S IDENTIFICATION



PROPERTY CLASS

HEX NUTS AND LOCKNUTS CLASSES 05 AND UP

MANUFACTURER'S IDENTIFICATION



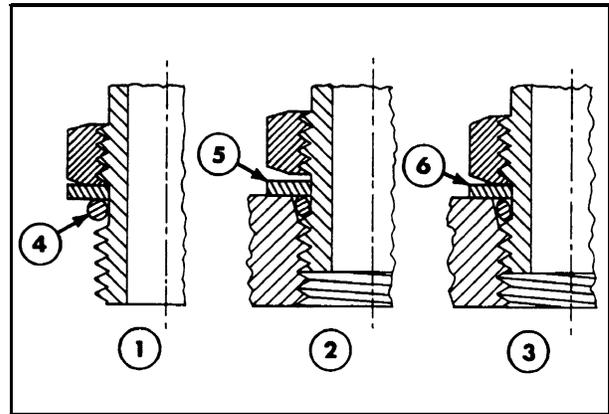
PROPERTY CLASS

CLOCK MARKING

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 (counterclockwise) 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.

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	FOOT POUNDS		NEWTON METERS		FOOT POUNDS		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" (12.7 mm) OD and larger with wall thickness of 0.035" (0.889 mm) or less. The torque is specified for 0.035" (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.

PIPE THREAD FITTING TORQUE

Before installing and tightening pipe fittings, clean the threads with a clean solvent or Loctite cleaner and apply sealant Loctite no. 567 for all fittings including stainless steel or no. 565 for most metal fittings. For high filtration/zero contamination systems use no. 545.

Thread Size	Torque (Maximum)
1/8" - 27	13 N·m (10 ft. lbs.)
1/4" - 18	16 N·m (12 ft. lbs.)
3/8" - 14	22 N·m (16 ft. lbs.)
1/2" - 14	41 N·m (30 ft. lbs.)
3/4" - 14	54 N·m (40 ft. lbs.)

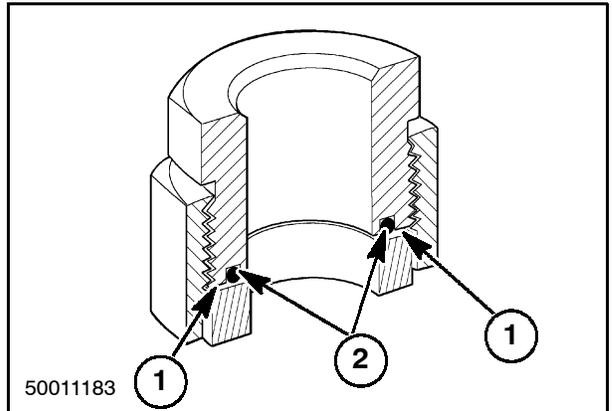
INSTALLATION OF ORFS (O-RING FLAT FACED) FITTINGS

When installing ORFS fittings thoroughly clean both flat surfaces of the fittings, 1, and lubricate the O-ring, 2, with light oil. Make sure both surfaces are aligned properly. Torque the fitting to specified torque listed throughout the repair manual.

IMPORTANT: *If the fitting surfaces are not properly cleaned, the O-ring will not seal properly. If the fitting surfaces are not properly aligned, the fittings may be damaged and will not seal properly.*

IMPORTANT: *Always use genuine New Holland replacement oils and filters to ensure proper lubrication and filtration of engine and hydraulic system oils.*

The use of proper oils, grease, and keeping the hydraulic system clean will extend machine and component life.



SECTION 31 - IMPLEMENT POWER TAKE OFF (PTO)

Chapter 1 - Drive Lines (Standard Tongue)

CONTENTS

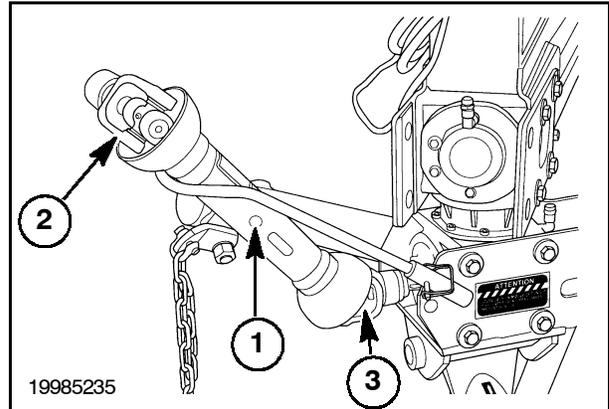
Section	Description	Page
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1441/1442 SWIVEL HITCH DRIVELINE

INTRODUCTION

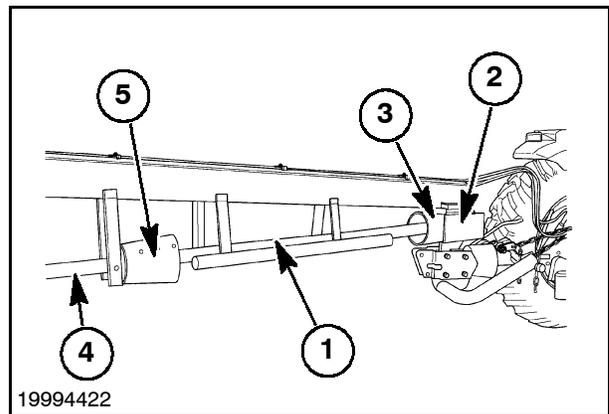
The primary PTO, 1, on the swivel hitch models uses a pair of U-joints to transfer power from the tractor to the lower swivel hitch gearbox. The U-joints are located at the tractor end of the primary PTO shaft, 2, and lower gearbox end, 3, allowing the tractor to turn the driveline during PTO operation.

The lower swivel hitch gearbox turns the upper gearbox, which transfers power to the intermediate PTO.



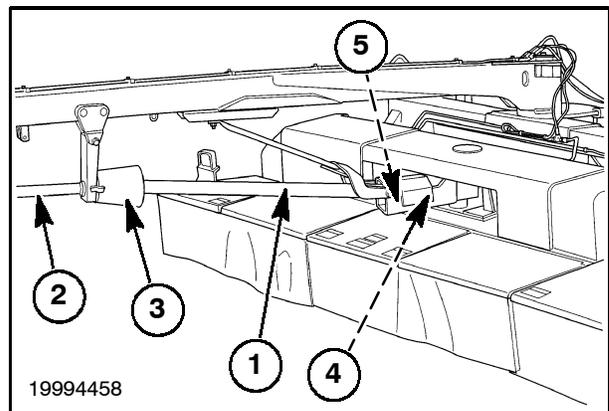
1

The intermediate PTO, 1, runs from the upper gearbox, 2, to a point midway along the tongue. The intermediate PTO uses a clamp yoke, 3, at the gearbox end and attaches to the jackshaft, 4, using a slip clutch assembly, 5.



2

The secondary PTO shaft, 1, attaches to the rear of the jackshaft, 2, using an Auto-Lok yoke, 3, and attaches to the center gearbox, 4, using a clamp hub assembly, 5.



3

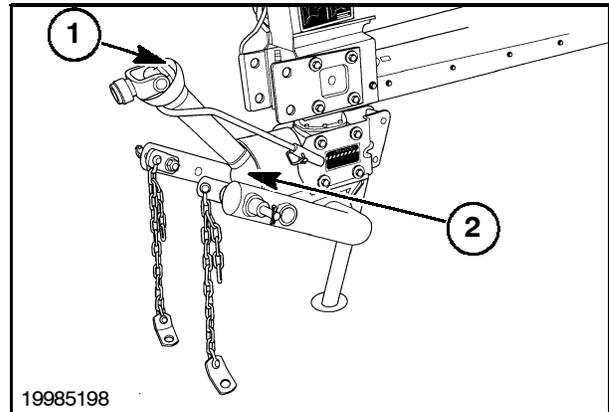
PRIMARY PTO

Front Half Removal

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

To service the front half of the primary PTO, 1, pull the front half from the rear half, 2, of the primary PTO.

Refer to the Slide Lok, Driveline Guards, and U-joints sections in this manual to service the front half of the primary PTO.



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Front Half Installation

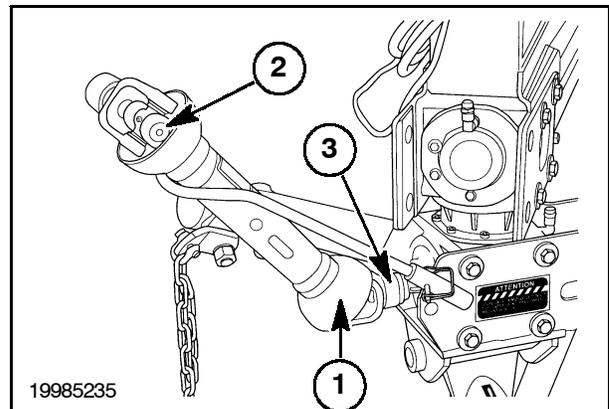
Align the female splines on the front half of the primary PTO with the male splines on the rear half of the primary PTO and slide the two shafts together.

NOTE: Ensure the shields fit together properly and the two halves telescope freely.

Rear Half Removal

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

1. To service the rear half of the primary PTO, 1, pull the front half, 2, from the rear half of the primary PTO.
2. Remove the protective shielding by squeezing the sides together until they release from the retaining pins.
3. Pull back the slide lock, 3, and slide the primary PTO off the lower swivel gearbox.
4. Refer to the Slide Lok, Driveline Guards, and U-joints sections in this manual to service the rear half of the primary PTO.

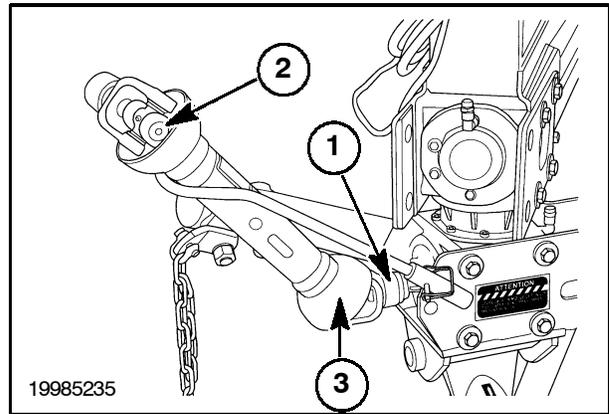


5

Rear Half Installation

1. Pull back the slide lock, 1, and slide the primary PTO on the lower swivel gearbox.
2. Install the protective shielding by squeezing the sides together until the mounting holes align with the retaining pins, and release the shield.
3. Align the female splines on the front half, 2, of the primary PTO with the male splines on the rear half, 3, of the primary PTO and slide the two shafts together.

NOTE: Ensure the shields fit together properly and the two halves telescope freely.



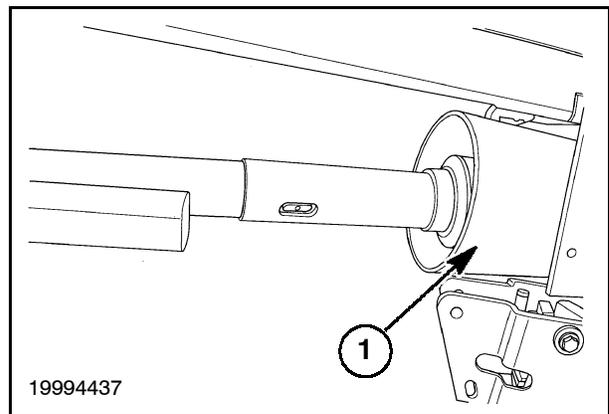
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INTERMEDIATE PTO

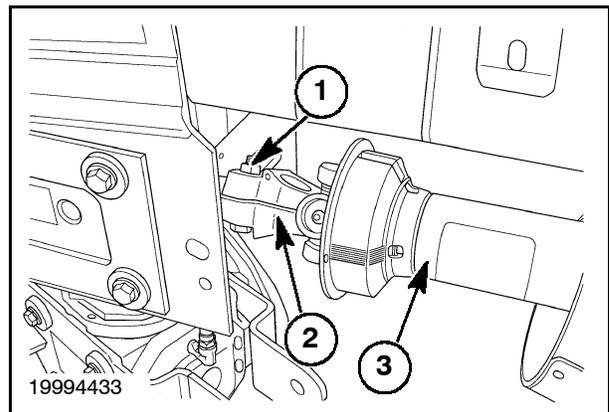
Front Half Removal

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

1. Remove the protective shielding, 1, by squeezing the sides together until they release from the retaining pins. Slide the shield rearward on the shaft to gain access to the retaining bolts.
2. Remove the two 1/2" x 3" yoke bolts, 1, and lock nuts from the clamp yoke, 2, and slide the intermediate PTO off the upper swivel gearbox output shaft.
3. To service the front half, 3, of the intermediate PTO pull the front half from the rear half of the primary PTO.
4. Refer to the Slide Lok, Driveline Guards, and U-joints sections in this manual to service the rear half of the primary PTO.



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Front Half Installation

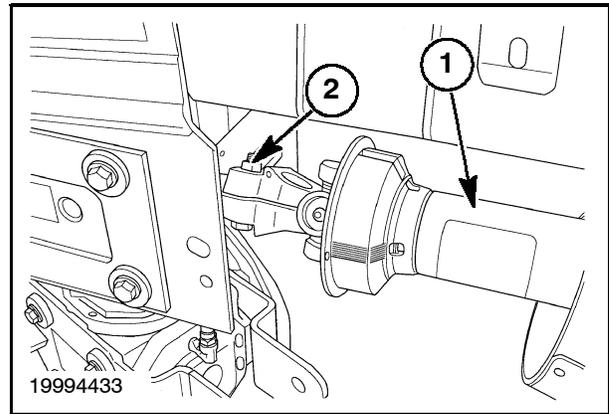
1. Align the male yoke shaft on the front half, 1, of the intermediate PTO with the female yoke tube on the rear half of the intermediate PTO and slide the two shafts together.

NOTE: In the female yoke tube of the intermediate PTO there is a phase, the male yoke shaft will only fit in two positions.

2. Install the intermediate PTO, shield and position over the PTO with the small end of the shield facing the gearboxes.

NOTE: Ensure the shields fit together properly and the two halves telescope freely.

3. Slide the intermediate PTO onto the upper gearbox output shaft until the clamp yoke bolt holes align with the groove in the output shaft.
4. Install the two 1/2" x 3 yoke bolts, 2, and lock nuts. Torque to 159 N·m (117 ft.-lbs.).
5. Install the protective shielding by squeezing the sides together until the mounting holes align with the retaining pins, and release the shield.



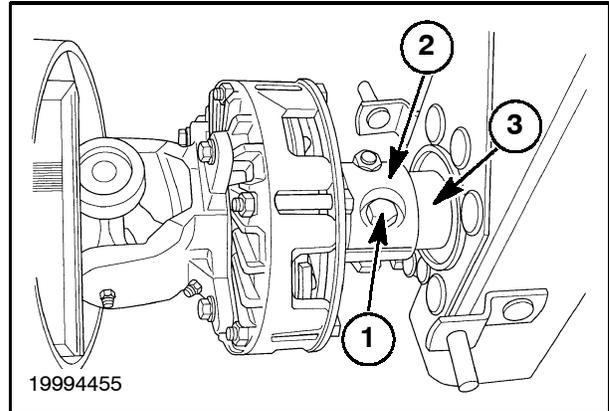
Rear Half Removal

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

1. Remove the protective shielding by pulling one side of shield from the retaining pin, then pull the other side from the retaining pin. Slide the shield rearward on the shaft to gain access to the retaining bolts.
2. Remove the two 1/2" x 2" yoke bolts, 1, and lock nuts from the slip clutch shaft, 2, and slide the intermediate PTO off the splined shaft.

NOTE: Use caution not to loose the spacer, 3, and shims when removing the rear half of the PTO.

3. Pull the rear half of the intermediate PTO from the front half.
4. Refer to the Driveline Guards, U-joints sections, and the Slip Clutch sections in this manual to service the rear half of the intermediate PTO.



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Rear Half Installation

1. Align the male yoke shaft on the front half of the intermediate PTO with the female yoke tube on the rear half of the intermediate PTO and slide the two shafts together.

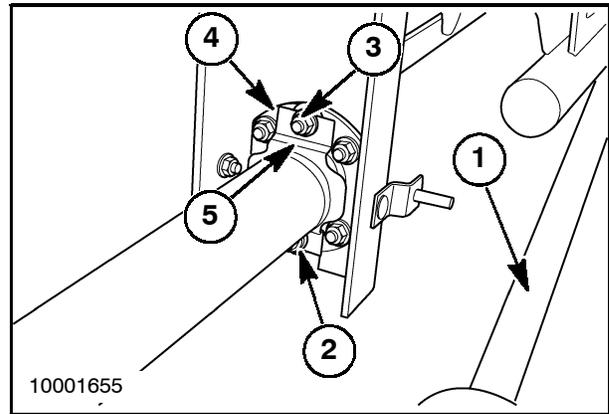
NOTE: In the female yoke tube of the intermediate PTO there is a phase, the male yoke shaft will only fit in two positions.

2. Slide the intermediate PTO onto the splined shaft until the clamp yoke bolt holes align with the groove in the shaft.
3. Install the two 1/2" x 2" yoke bolts, 1, and lock nuts from the slip clutch shaft. Torque to 159 N-m (117 ft.-lbs.).
4. Install the protective shielding by pulling one side of shield on the retaining pin, and then pull the other side on the retaining pin.

JACKSHAFT

Removal

1. Remove the intermediate PTO, 1, from the jackshaft, as described earlier in this section.
2. Remove the five 1/2"-13 carriage bolts and one 1/2"-13 cap screw, 2, and nuts, 3, from the flangettes, 4, and bracket, 5.



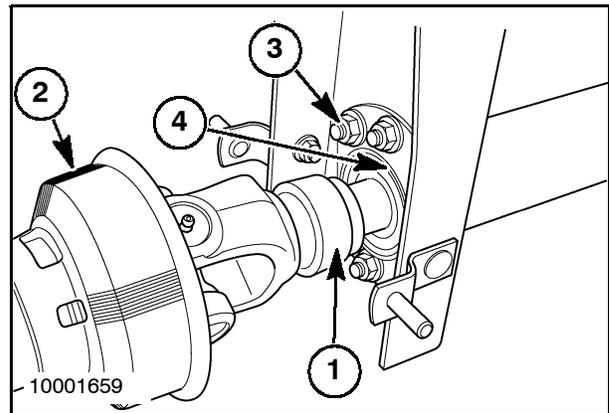
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3. Remove the protective shielding by pulling one side of shield from the retaining pin, then pull the other side from the retaining pin. Slide the shield rearward on the shaft to gain access to the retaining bolts.
4. Pull back on the auto lock collar, 1, and pull the secondary PTO, 2, from the jackshaft.
5. Remove the six 1/2"-13 carriage bolts and nuts, 3, from the flangettes, 4.

NOTE: There are two 1/2" flat washers installed between the shield bracket and flange at the slot in the support.

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

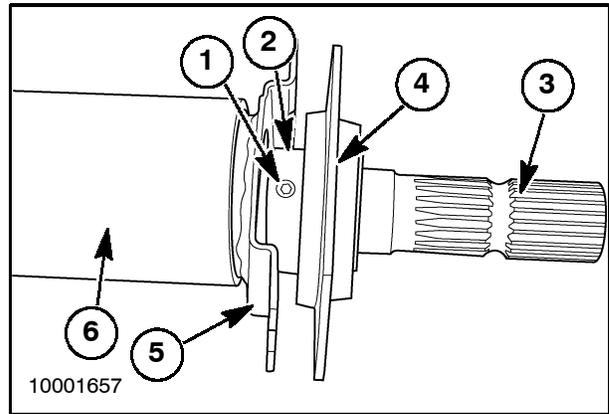
6. Support the entire jackshaft and shift the jackshaft towards the cutter bar, then lower the jackshaft to the ground.



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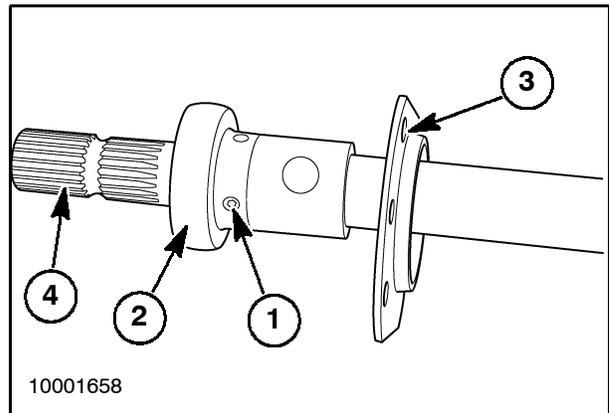
Disassembly

1. Loosen the setscrews, 1, from the bearing, 2, on the rear half of the shaft assembly, 3.
2. Remove the bearing and inside flangette, 4, from the shaft assembly.
3. Remove the bracket, 5, from the shaft assembly.
4. Slide the protective tube, 6, from the shaft assembly.



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5. Loosen the setscrews, 1, from the bearing, 2, on the front half of the shaft assembly.
6. Remove the bearing and inside flangette, 3, from the shaft assembly, 4.



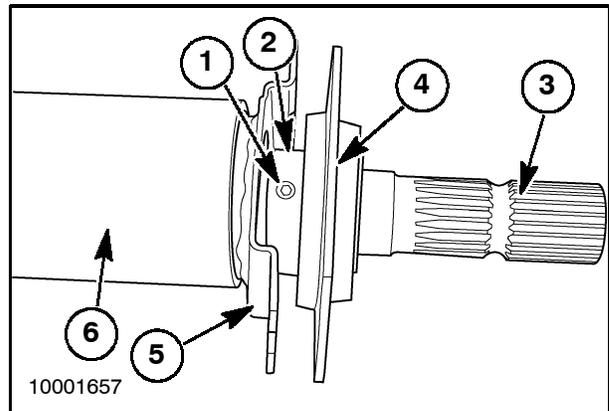
14

Inspection

1. Clean and check the splines on the shaft for wear or distortion. If necessary, replace the shaft.
2. Check the flange bearing for heat discoloration. A blue discoloring indicates overheating and possible damage to the bearing. Make sure that the flange bearing rotates smoothly with no binding or roughness.

Assembly

1. Install the inside flangette, 3, on the shaft assembly, 4.
2. Install the bearing, 3, on the front half of the shaft assembly until bearing touches the welded spacer.
3. Tighten the setscrews, 1, securely.
4. Slide the protective tube, 6, on the shaft assembly.
5. Install the bracket, 5, on the rear half of the shaft assembly.
6. Install the inside flangette, 4, on the shaft assembly.
7. Install the bearing, 2, on the shaft assembly, tighten the setscrews securely.



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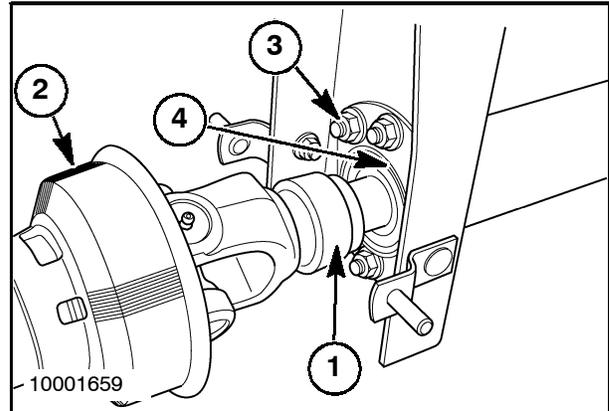
Installation

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

1. Support the entire jackshaft and raise it into position so the flangettes rest in the bracket openings.

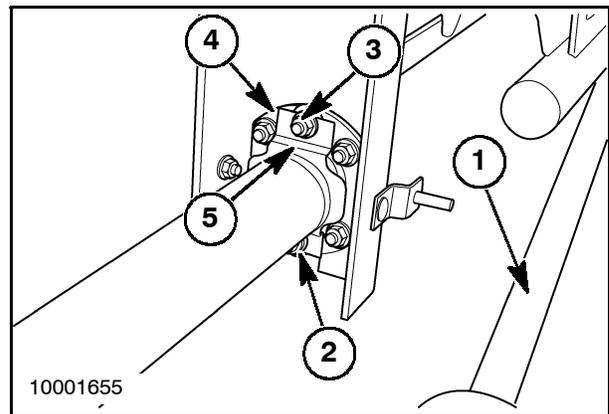
NOTE: There are two 1/2" flat washers installed between the shield bracket and flangette at the slot in the support.

2. Install the outside flangette, 4, and six 1/2"-13 carriage bolts and nuts. Torque the bolts to 113 N·m (83 ft.-lbs.).
3. Pull back on the auto lock collar, 1, and push the secondary PTO, 2, on the jackshaft.
4. Install the protective shielding by pulling one side of shield on the retaining pin, then pull the other side on the retaining pin.



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5. Install the five 1/2"-13 carriage bolts and nuts, 3, from the flangettes, 4, and bracket. Torque the bolts to 113 N·m (83 ft.-lbs.).
6. Install the one 1/2"-13 cap screw, 2, in the bottom hole of the bracket. Torque the bolts to 113 N·m (83 ft.-lbs.).
7. Install the intermediate PTO, 1, on the jackshaft, as described earlier in this section.



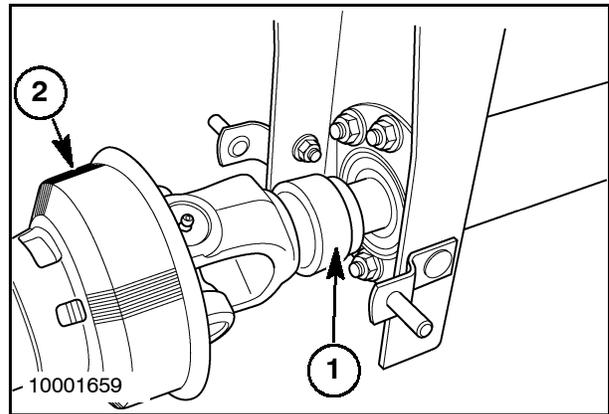
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SECONDARY PTO

Front Half Removal

IMPORTANT: The PTO shafts are very heavy and awkward; use caution not to drop the shaft assemblies as personal injury or damage to the components may result.

1. Remove the protective shielding by squeezing the sides together until they release from the retaining pins. Slide the shield rearward on the shaft to gain access to the auto lock collar.
2. Slide the auto lock collar, 1, rearward and pull the secondary PTO, 2, from the jackshaft.
3. To service the front half of the secondary PTO pull the front half from the rear half of the secondary PTO.
4. Refer to the Auto Lok, Driveline Guards, and U-joints sections in this manual to service the rear half of the secondary PTO.



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Front Half Installation

1. Align the male yoke shaft on the rear half of the secondary PTO with the female yoke tube on the front half of the secondary PTO and slide the two shafts together.
2. Install the secondary PTO, shield and position over the PTO with the small end of the shield facing the gearboxes.

NOTE: Ensure the shields fit together properly and the two halves telescope freely.

3. Slide the secondary PTO onto the jackshaft until the auto lock slips into position.
4. Install the protective shielding by squeezing the sides together until the mounting holes align with the retaining pins, and release the shield.