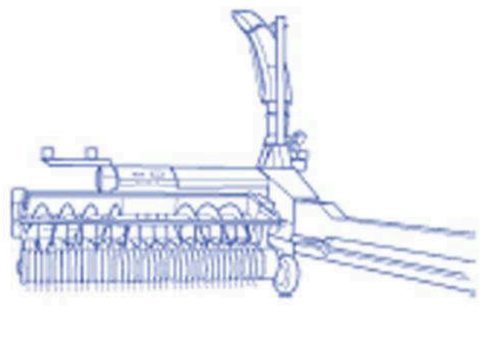


NEW HOLLAND
FP230
FP240
Forage Harvester

REPAIR MANUAL

NEW HOLLAND AGRICULTURE

SERVICE

86900642

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The following pages are the collation of the contents pages from each section and chapter of the FP230, FP240 Repair manual.

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. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the FP230, FP240 Forage Harvesters.

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SECTION 00 - GENERAL INFORMATION

BOOK 1 - 86900643

Chapter 1 - General Information

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SECTION 31 - IMPLEMENT DRIVELINES

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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	9613386*	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.
		15W-40 API CF-4	9613350*	1 L	
		15W-40 API CF-4	9613351*	4 L	
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.
		134D – ESN-M2C134-D	9613367*	4 L	
		134D – ESN-M2C134-D	9624785*	10 L	
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.*

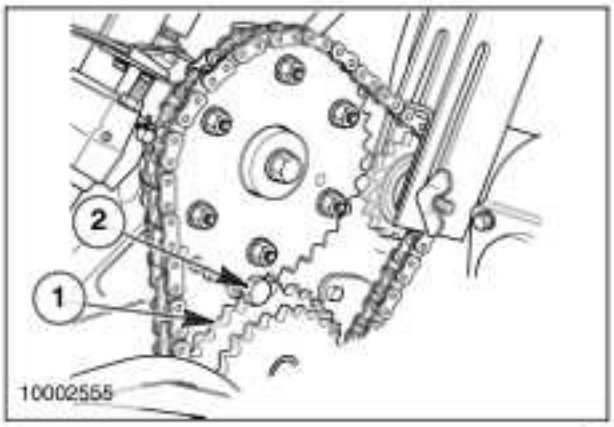
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BURNISHING THE ELECTRIC CLUTCH

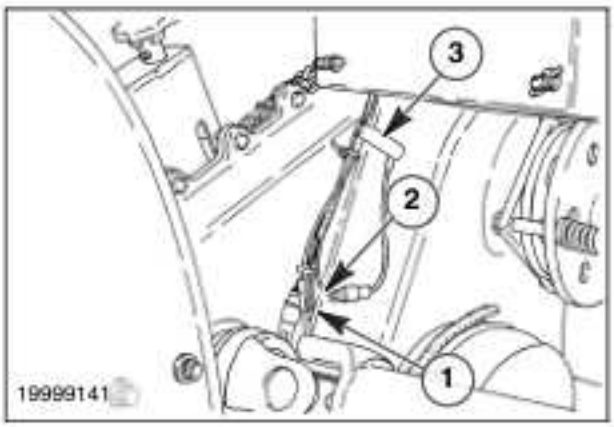
NOTE: *Burnishing the clutch should take place whenever the armature is replaced and magnets are re-machined or replaced.*

1. Install the 30-tooth length-of-cut sprocket, 1, if not already installed. Place a 5/8" bolt, 2, in the teeth between the upper sprocket and lower sprocket to lock the gearbox.



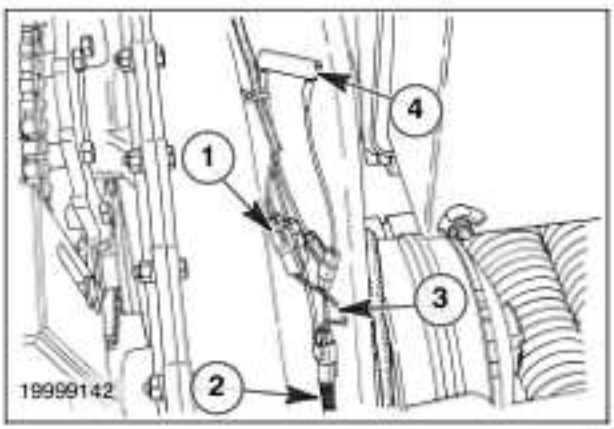
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2. Disconnect the green brush box wire, 1, from the main wire harness, 2. Attach one end of the burnishing resistor (PN 859959), 3, to the main wire harness and the other to the green wire.
3. Using all safety precautions, start the tractor and engage the PTO. Increase PTO speed to rated speed with the electric clutch in neutral.
4. Engage the forward clutch for one second and then disengage the forward clutch for ten seconds. Repeat this procedure 15 times.
5. Disengage the PTO and shut off the engine.
6. Remove the burnishing resistor and connect main wire harness directly to the green wire.



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7. Separate the connector between the main wire harness, 1, and clutch harness (reverse magnet), 2. Attach the adapter wire harness (PN 86605901), 3, to the main wire harness and clutch harness connectors. Attach the burnishing resistor, 4, to the remaining wire leads on the adapter harness.
8. Using all safety precautions, start the tractor and engage the PTO. Increase PTO speed to rated speed with the electric clutch in neutral.
9. Engage the reverse clutch for one second and then disengage the reverse clutch for ten seconds. Repeat this procedure 15 times.
10. Disengage the PTO and shut off the engine.
11. Remove the burnishing resistor and connect main wire harness to the clutch harness.
12. Remove bolt from length-of-cut sprocket and change to desired sprocket.



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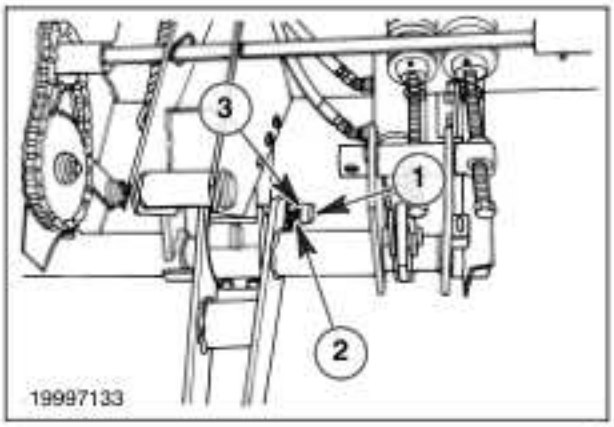
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ATTACHMENT LIFT CYLINDER REPAIR

Removal

Remove the load on the cylinder. If an attachment is on the harvester, lower the attachment to the ground or lift the attachment and install the lockout pin, 1.

Insert the lockout pin through the safety lock, 2. Secure with clevis pin, 3.



1

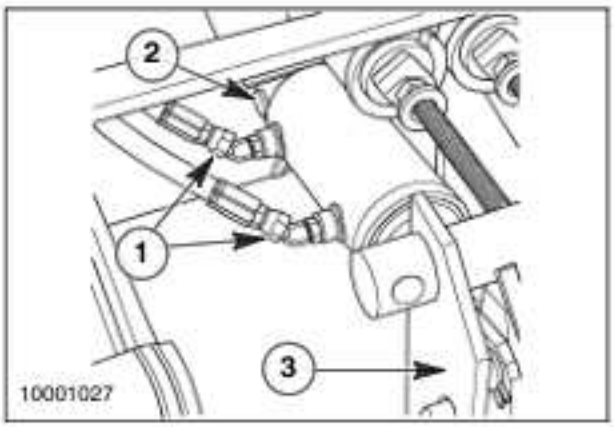
Clean the area around the hydraulic fittings, 1. Remove the hydraulic hoses from the cylinder. Drain the oil into a container.

NOTE: *If the 45 degree fittings are removed, be careful not to lose the orifice located in the port under each fitting. Make note of the direction in which the orifices are installed.*

Remove the left cotter pin in the end of the rear cylinder pin, 2. Remove the pin.

Remove the right cotter pin in the end of the front cylinder pin, 3. Remove the pin.

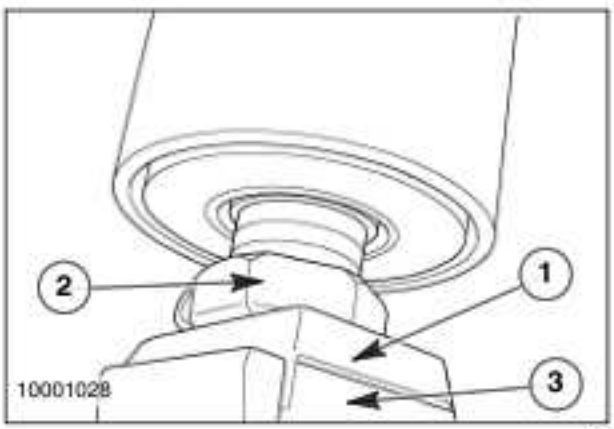
Remove the cylinder.



2

Cylinder Repair

1. Flatten the piece of sheet metal, 1, between the nut, 2, and clevis, 3.
2. Remove the nut and clevis from the end of the piston rod.



3

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