SERVICE MANUAL

LS140, LS150
SKID-STEER

NEW HOLLAND
CONSTRUCTION

87036977

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The following pages are the collation of the contents pages from each section and chapter of the LS140, LS150 Repair manual. Complete Repair part # 87036977.

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 LS140, LS150 Skid Steer.

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BOOK 1 - 87042550

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SECTION 10 - ENGINE

BOOK 1 - 87042550

Chapter 1 - LS140-N843 (Before Engine S/N 93206) LS150-N843H (Before Engine S/N 91509)

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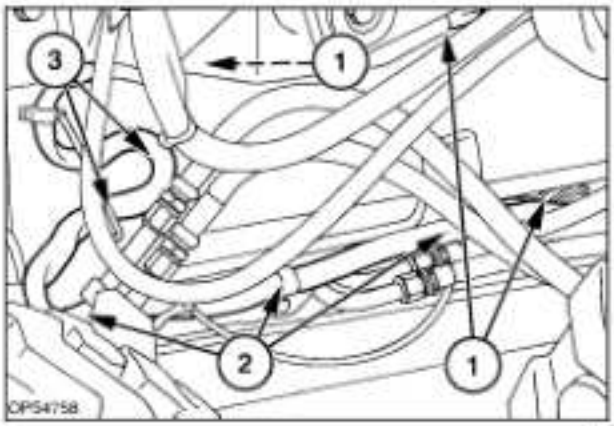
Inspection Item		Standard Dimension	Standard Value	To Be Repaired	Allowable Limit	Remarks
PISTON RING - Cont.						
Piston ring end gap	1st ring		0.2 - 0.35 mm (0.008" - 0.014")		1.0 mm (0.040")	
	2nd ring		0.2 - 0.4 mm (0.008" - 0.016")			
	Oil ring		0.2 - 0.4 mm (0.008"-0.016")			
CONNECTING ROD						
Twist between small and large end holes (per 100 mm)			0.08 mm max. (0.0031")		0.2 mm (0.0079")	
Straightness at 100 mm between small and large end hole			0.05 mm max. (0.0020")		0.15 mm (0.0059")	
Front-to-rear clearance between connecting rod and crank pin			0.1 - 0.3 mm (0.004" - 0.012")		0.7 mm (0.0276")	
Connecting rod bearing-to-crank pin clearance			0.035 - 0.085 mm (0.0014" - 0.0033")		0.2 mm (0.0079")	Oil clearance
Crush height of large end bearing			27.517 - 27.557 mm (1.0833" - 1.0849")			
Connecting rod bearing (inner diameter x width)		52 x 19.8 mm (2.047" x 0.779")	52 x 19.8 mm (2.047" x 0.779")			
Connecting rod bolt torque			49 - 54 N·m (36.2 - 39.8 ft. lbs.)			
Weight difference with piston assembly			less than 10 g (0.022 lbs)			
CRANKSHAFT						
Diameter of journal		68 mm (2.677")	67.957 - 67.970 mm (2.6755" - 2.6760")		67.4 mm (2.654")	Undersize 0.25, 0.5 mm (0.01", 0.02")
Diameter of pin		52 mm (2.047")	51.964 - 51.975 mm (2.0458" - 2.0463")		51.4 mm (2.024")	Undersize 0.25, 0.5 mm (0.01", 0.02")
Roughness, main journal & crank pin		63_{μ} (1.6Z)				
Crankshaft deflection			0.03 mm max. (0.0012")		0.06 mm (0.0024")	
Crankshaft end play			0.1 - 0.4 mm (0.004" - 0.016")			
Thrust washer thickness		3.0 mm (0.118")	2.95 - 3.0 mm (0.116" - 0.118")		2.8 mm (0.110")	
O.D. x I.D. of main journal bushing		72 x 68 mm (2.8346" x 2.6772")	72 x 68 mm (2.8346" x 2.6772")			Undersize 0.25, 0.5 mm (0.01", 0.02")
Clearance between crankshaft journal bushing			0.044 - 0.116 mm (0.0017" - 0.0046")		0.2 mm (0.008")	Oil clearance
O.D. x I.D. of center bearing		72 x 68 mm (2.8346" x 2.6772")	72 x 68 mm (2.8346" x 2.6772")			
Clearance between crankshaft journal and bushing			0.044 - 0.102 mm (0.0017" - 0.0040")		0.2 mm (0.008")	Oil clearance

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PROBLEM	POSSIBLE CAUSE	CORRECTION
Hydraulic system hot	Low oil flow pump	Plugged inlet line, clean or replace line
	Main control valve linkage or spool binding or damaged	Check and correct linkage
	Auxiliary boom hydraulic control not in neutral	Lock handle in neutral when not in use
	Hydraulic oil cooler restricted	Clean oil cooler
	Leaking cylinder packing	Repair cylinders
	Main system relief valve low pressure	Check main system pressure
	Hydraulic attachment being over used	Back off and let system cool down, DO NOT operate at or close to relief pressure
Oil filter indicator light stays on	Oil filter clogged	Change filter
	Incomplete circuit	Check the DKGN/O wire and connections
	Undersize tubes, hoses, or fittings	Replace any undersize tubes, hoses, or fittings
	Filter base	Replace if pressure differential across filter is over 40 PSI

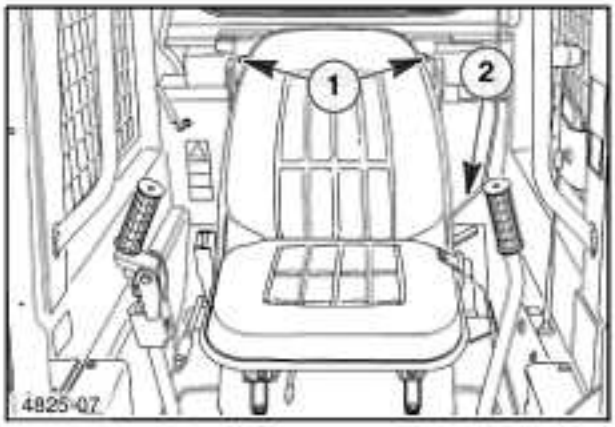
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23. Removing the slack from the wire harness along the top of ROPS at 1, and along the top of the final drive case at 2, pull the slack to the front and retaining loop at 3. Secure the wire harness with clamps and ties previously removed.



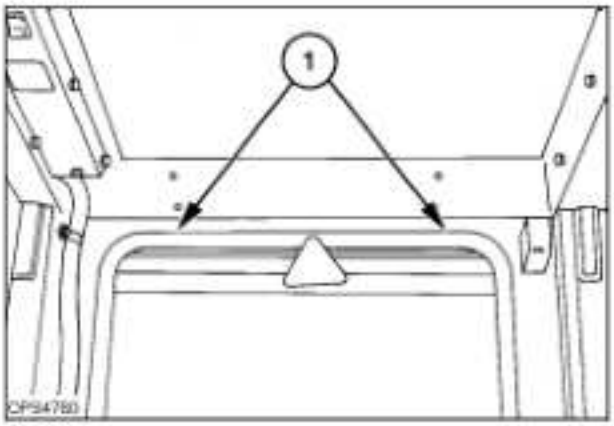
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24. Reinstall the seat/seat pan support assembly retaining hardware, 1, and connect the seat/seat belt wire harness to the main wire harness. Make sure the wire harness is to the inside of the boom lock linkage to prevent interference when the seat pan support assembly is pivoted up to the raised, latched position. Reattach the latch rod, 2, and install the retaining pin.
25. Reinstall the headliner and supports.



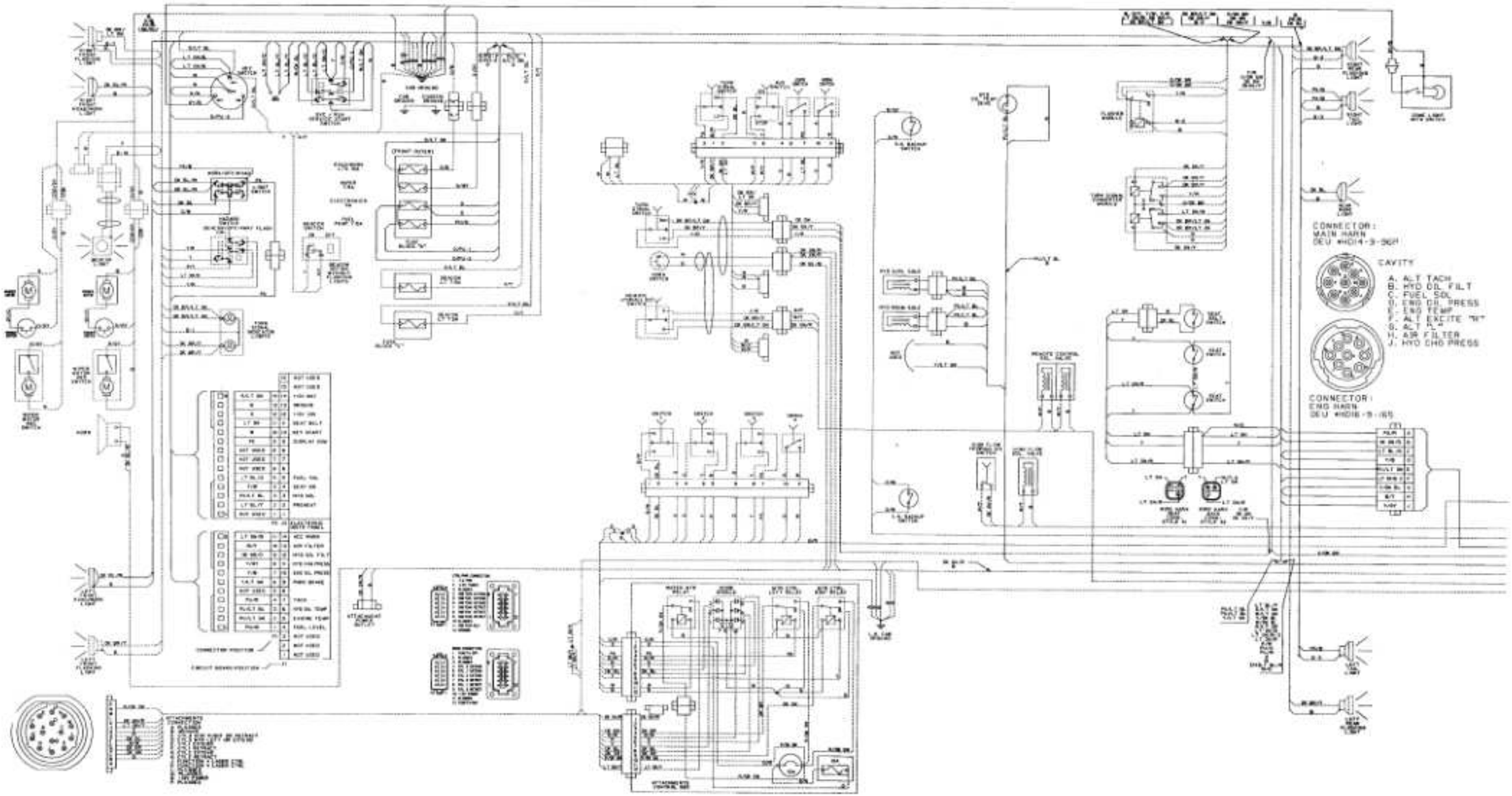
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26. Reinstall the rear window glass and molding, 1, if removed, and reinstall the locking strip to secure the glass in the molding.



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