# SERVICE MANUAL

## LS160, LS170
## SKID-STEER

NEW HOLLAND
CONSTRUCTION

87036983

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**The following pages are the collation of the contents pages from each section and chapter of the LS160, LS170 Repair manual. Complete Repair part # 87036983.**

**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 LS160, LS170 Skid Steer.**


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# SECTION 00 - GENERAL INFORMATION

**BOOK 1 - 87042552**

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# SECTION 10 - ENGINE

BOOK 1 - 87042552

## Chapter 1 - LS160 - N844 (Before Engine S/N 124735)
## LS170 - N844T (All)

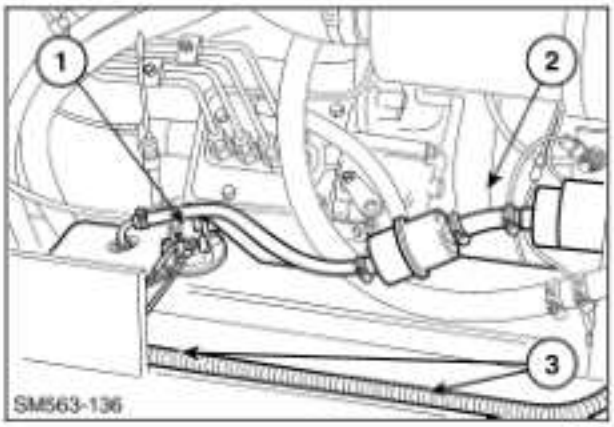
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18. Remove harness from left rear of engine area after disconnecting wires from fuel sender, 1, and fuel pump, 2. Remove tubing from the harness that is located in fuel tank groove, 3.

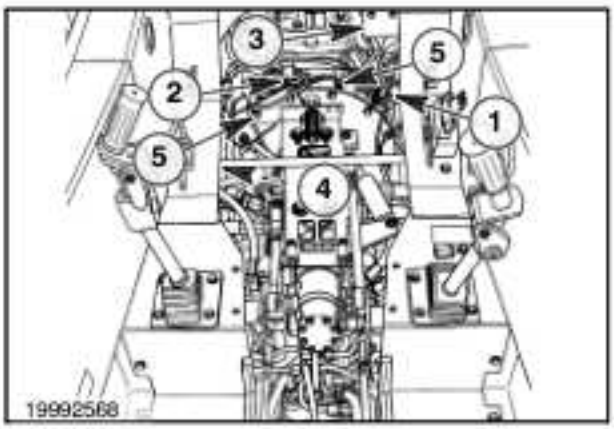



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19. Thoroughly clean the connector between the main and engine harness. Make sure the connector is dry.

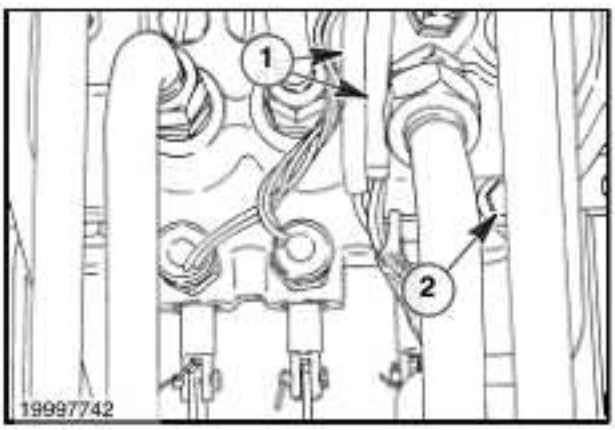
20. Unplug the main wire harness from the engine wire harness, 1, and remove the ground wires from the engine bellhousing ground stud, 2. Remove wires from the engine fuse and relay panel, 3.

21. Remove the hydraulic oil temperature sender wires, 4, and remove the harness from the clamps on the face of bellhousing, 5. Remove the remaining bellhousing clamps.




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22. Disconnect the control valve connectors, 1, remove the harness from the J clamp, 2, on the valve and pull the harness out through the left fender area.

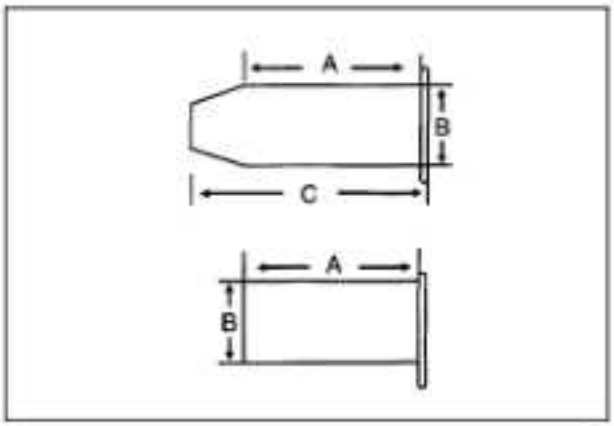



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## BOOM/CYLINDER PIVOT PINS SIZE




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| PART NUMBER | A | B | C |
|---|---|---|---|
| 9614349 | 95 mm (3-3/4") | 38 mm (1-1/2") | |
| 86501420 | 49 mm (1-15/64") | 60.3 mm (2-3/8") | 113 mm (4-29/64") |
| 86501422 | 77 mm (3-1/32") | 60.3 mm (2-3/8") | 141 mm (5-9/16") |
| 86501430 | 72.3 mm (2-7/8") | 38.10 mm (1-1/2") | 112.5 mm (4-7/16") |
| 86501434 | 57.8 mm (2-9/32") | 38.1 mm (1-1/2") | 92 mm (3-5/8") |
| 86504316 | 40.0 mm (1-5/32") | 60.3 mm (2-3/8") | 113 mm (4-7/16") |
| 86521982 | 117 mm (4-39/64") | 38.1 mm (1-1/2") | |

***NOTE:*** *After the tapered pivot pin retaining hardware is torqued, the pins must be properly seated. Using a hammer, strike the head of the bolt and pin several times to seat the tapered pin in the taper of the boom and/or ROPS. Retorque the hardware to the specified torque. Repeat this process until the torque is maintained*



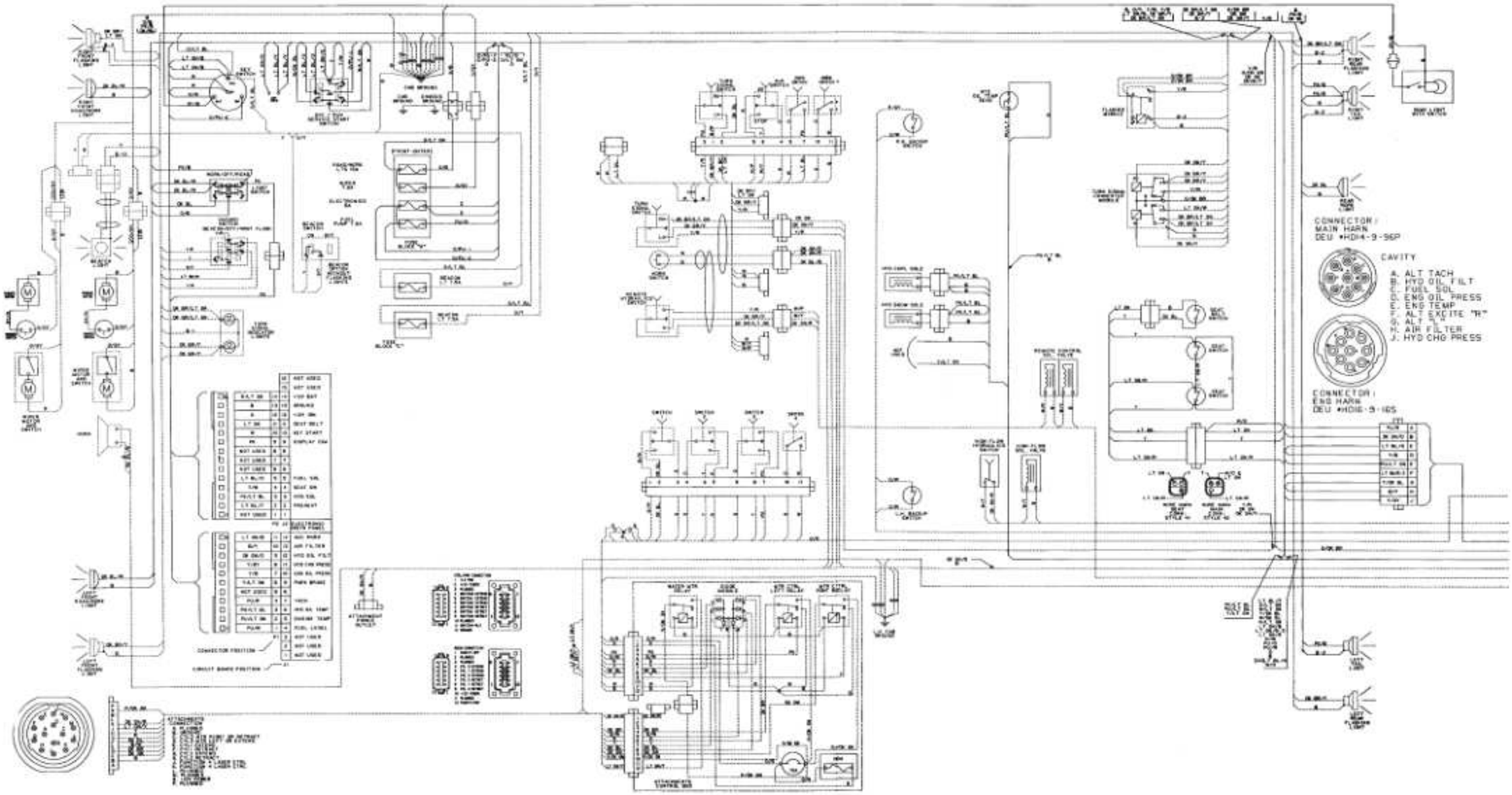
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## HIGH FLOW HYDRAULICS TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | CORRECTION |
|---|---|---|
| No switch operation | No battery voltage to switch | Check power supply at 15-amp fuse (attachment) engine fuse panel |
| | | Check DKGN/R (Dark Green/Red) wire from fuse to switch |
| | Inoperative switch | Replace switch |
| No selector valve operation | No battery voltage to selector valve | Check switch for proper operation |
| | | Check W/T (White/Tan) wire from switch to selector valve |
| | No circuit ground | Check B (Black) ground wire for proper grounding |
| | No selector valve spool movement | Check valve spool for binding and sticking |
| Hydraulic oil overheats | Using 1/2" quick couplers | Must use 3/4" quick couplers |
| | Control valve and boom steel lines and hoses were not changed from 5/8" to 3/4" | Change lines and hoses to 3/4" |
| | Operating high flow when not required | Turn high flow switch to the "OFF" position |
| | Operating high flow at relief pressure continuously | Operate attachment at lesser load |
| | Operating attachment when not applying a load to the attachment | Stop attachment when not loaded (moving from one work area to another) |
| | Operating attachment when high oil flows are not required | Turn high flow switch to the "OFF" position |
| | Restriction in pressure or return lines | Check and repair |
| | Oil cooler restricted not allowing cooling air to flow properly | Clean oil cooler and radiator |



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