

# John Deere 310L EP Backhoe Loader Repair Technical Manual - TM14312X19

## 310L EP Backhoe Loader Repair

(PIN: 1T0310EL\_\_G329328—390995)



JOHN HARE



COLLECTION

## REPAIR TECHNICAL MANUAL 310L EP Backhoe Loader

(PIN: 1T0310EL\_\_G329328—390995)

TM14312X19 01DEC18 (ENGLISH)

For complete service information also see:

310L EP Backhoe Loader Diagnostic..... TM14311X19  
4TNV98C and 4TNV98CT Diesel Engines (Final Tier 4/  
Stage IV platform) Technical Manual..... ctm120319  
Hydraulic Cylinders..... 90519



Worldwide Construction and  
Forestry Division

**Covers:** 310L,1T0310EL\_\_,G329328 390995)

**Type:** Service Manual

**Language:** English

**Pages:** 525

**Format:** PDF

**Features:** Bookmarked, searchable, printable

**Compatibility:** Windows/Mac/Tablet/Mobile

This service manual contains important information for the maintenance, troubleshooting and servicing of the **John Deere 310L EP Backhoe Loader Repair Technical Manual - TM14312X19**

In this manual you will find detailed specifications, illustrations, schematics, diagrams and step-by-step procedures to properly service and diagnose the machine to the manufacturer's standards.

**Contents:**

- General Information
- Specifications
- Serial Number Location
- Engine Specifications
- Engine Diagnostics
- Engine Tests and Adjustments
- Engine Repair
- Power Train
- Transmission
- Axles
- Differential
- PTO
- Hydraulic System
- Electrical System
- Electrical Tests and Diagnostics
- Wiring Diagram / Schematic
- Ignition and Charging
- Steering
- Brakes
- Wheels
- Operator's Platform
- Body Panels
- Disassembly and Assembly
- Diagnostics, Tests and Adjustments
- Troubleshooting
- and much more...

Please note this manual is in **downloadable PDF format only**. If you have any questions about this product or would like to request sample pages, please contact us and reference the product name or SKU.

# Loader Boom Cylinder Remove and Install

SPECIFICATIONS	
310L, 310L EP, 310SL, 310SL HL, 315SL, 410L Loader Boom Cylinder Weight (approximate)	36 kg 80 lb
325SL Loader Boom Cylinder Weight (approximate)	46 kg 101 lb
710L Loader Boom Cylinder Weight (approximate)	54 kg 120 lb

1. Park and prepare machine for service. [See Park and Prepare for Service Safely](#). (Group 0001.)

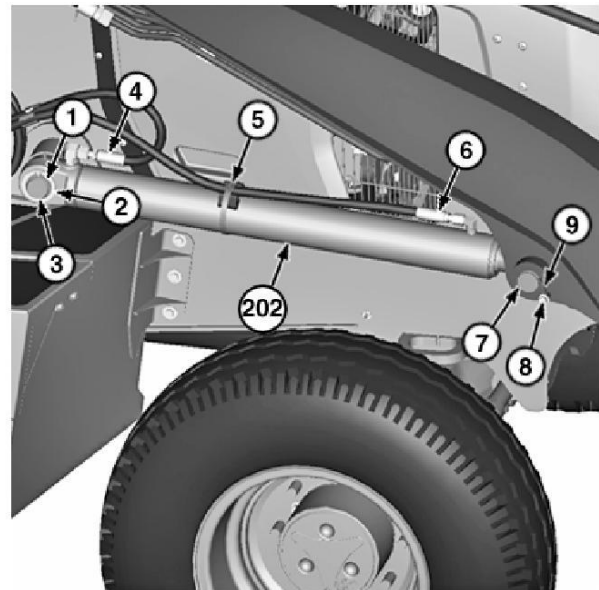


## 2. CAUTION:

To avoid injury from escaping fluid under pressure, stop engine and relieve the pressure in the system before disconnecting or connecting hydraulic or other lines. Tighten all connections before applying pressure.

Release pressure in hydraulic system. See Hydraulic Circuit Pressure Release - document TM14311X19 - (Group 9025-25.)

3. Disconnect battery negative (–) ground cable or turn battery disconnect switch (if equipped) to the OFF position. See Battery Disconnect—If Equipped - document OMT410085X19 - (Operator's Manual.)



4. TX1191241A-UN: Loader Boom Cylinder

## LEGEND:

1-Snap Ring  
2-Washer  
3-Pin  
4-Hydraulic Hose  
5-Clamp  
6-Hydraulic Hose  
7-Pin  
8-Cap Screw  
9-Plate  
202-Boom Cylinder

Remove clamp (5).

5. Install identification tags and disconnect hydraulic hoses (4 and 6) from boom cylinder (202). Close all openings using caps and plugs.



## 6. CAUTION:

Prevent crushing injury from heavy component. Use appropriate lifting device.

Attach appropriate lifting device to boom cylinder.

Item	Measurement	Specification
310L, 310L EP, 310SL, 310SL HL, 315SL, 410L Loader Boom Cylinder	Weight (approximate)	36 kg 80 lb
325SL Loader Boom Cylinder	Weight (approximate)	46 kg 101 lb
710L Loader Boom Cylinder	Weight (approximate)	54 kg 120 lb

7. Remove snap ring (1) and washer (2).
8. While supporting rod end of boom cylinder, remove cap screw (8), plate (9), and pin (7). Lower rod end of cylinder away from loader arm and slide boom cylinder off pin (3).
9. Inspect and repair loader boom cylinder as necessary. [See Loader Cylinders Disassemble and Assemble](#). (Group 3160.)
10. Apply multipurpose grease to inside of all bushings before installing cylinder.

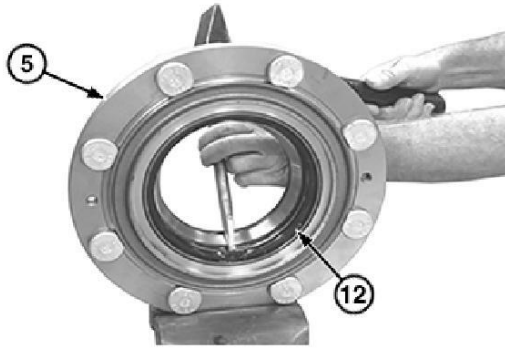


## 11. CAUTION:

Prevent crushing injury from heavy component. Use appropriate lifting device.

Attach appropriate lifting device to boom cylinder.

## Tie Rods Removal

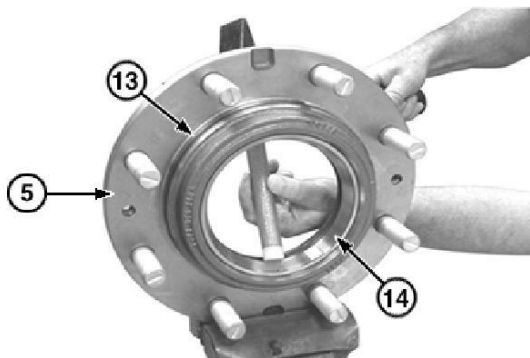


3. XJ1241997-UN: Seal Ring

**LEGEND:**

**5-Wheel Hub**  
**12-Seal Ring**

Remove seal ring (12) from wheel hub (5).

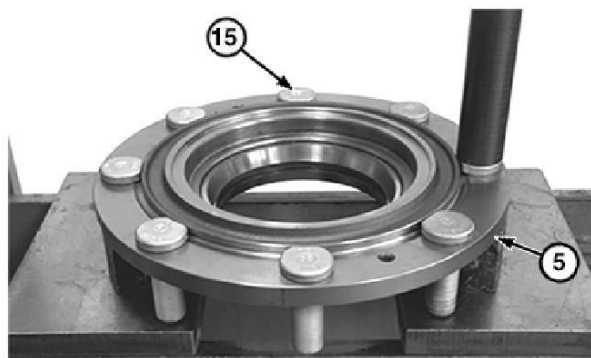


4. XJ1241998-UN: Tapered Roller Bearing Cups

**LEGEND:**

**5-Wheel Hub**  
**13-O-Ring**  
**14-Tapered Roller Bearing Cup (2 used)**

Remove tapered roller bearing cups (14) from wheel hub (5).  
 Remove and replace O-ring (13).

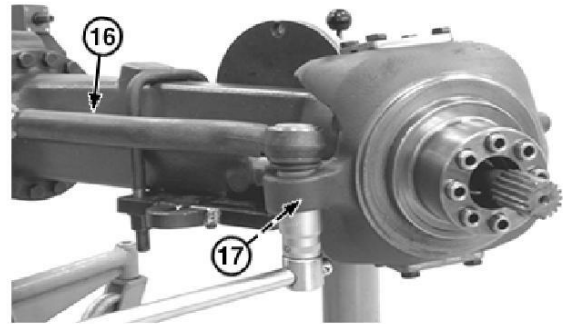


5. XJ1242000-UN: Wheel Hub Studs

**LEGEND:**

**5-Wheel Hub**  
**15-Wheel Hub Stud (8 used)**

Remove and inspect wheel hub studs (15). Replace as necessary.

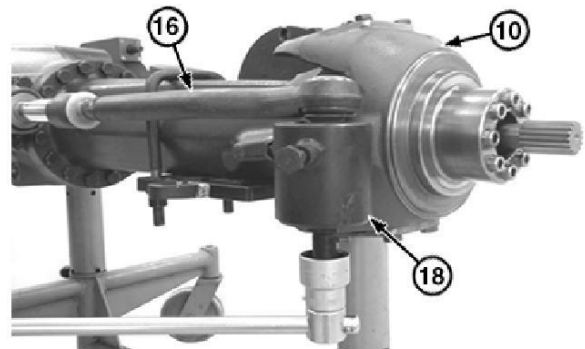


1. XJ1242002-UN: Self-Locking Nut

**LEGEND:**

**16-Tie Rod**  
**17-Lock Nut**

Remove lock nut (17) from tie rod (16).

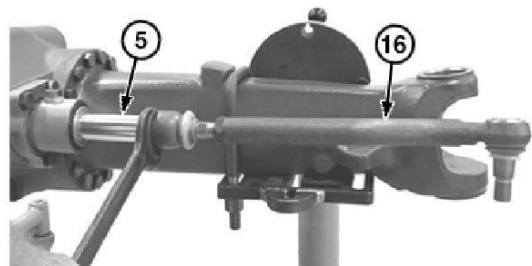


2. XJ1242003-UN: Tie Rod

**LEGEND:**

**10-Knuckle Housing**  
**16-Tie Rod**  
**18-JDG10799 Tie Rod End Separating Tool**

Remove tie rod (16) from knuckle housing (10) with JDG10799 Tie Rod End Separating Tool (18).



3. XJ1242004-UN: Tie Rod From Piston Rod Removal

**LEGEND:**

**16-Tie Rod**  
**19-Steering Cylinder Piston Rod**

Remove tie rod (16) from steering cylinder piston rod (19).



Thank you very much  
for your reading.  
Please click here  
to get more information.