

John Deere E300LC (T2/S2) Excavator Diagnostic, Operation and Test Service Manual (TM13102X19)

E300LC Excavator Diagnostic

OPERATION AND TEST MANUAL

T2/S2 models E300LC (PIN: 1YNE30AL_ _C600002-; 1YNE30A_ _D600014-)

TM13102X19 27DEC15 (ENGLISH)

For complete service information also see:

E300LC Excavator Repair TM13105X19

JDLink (MTG) Technical Manual TM114519

PowerTech Plus 4.5L and 6.8L Diesel
Engines Level 14 Electronic Fuel System With Denso HPCR CTM320

PowerTech 4.5L & 6.8L Diesel Engines
Tier 1/Stage I, Tier 2/Stage II, Tier 3/Stage IIIA, Tier 3/Stage IIB, Tier 3/Stage III, (Base) CTM104

PDF



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John Deere Construction and Forestry

Covers: E300LC,1YNE30AL_ _C600002-;,1YNE30A_ _D600014-)

Type: Service Manual

Language: English

Pages: 1279

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 E300LC (T2/S2) Excavator Diagnostic, Operation and Test Service Manual (TM13102X19)**

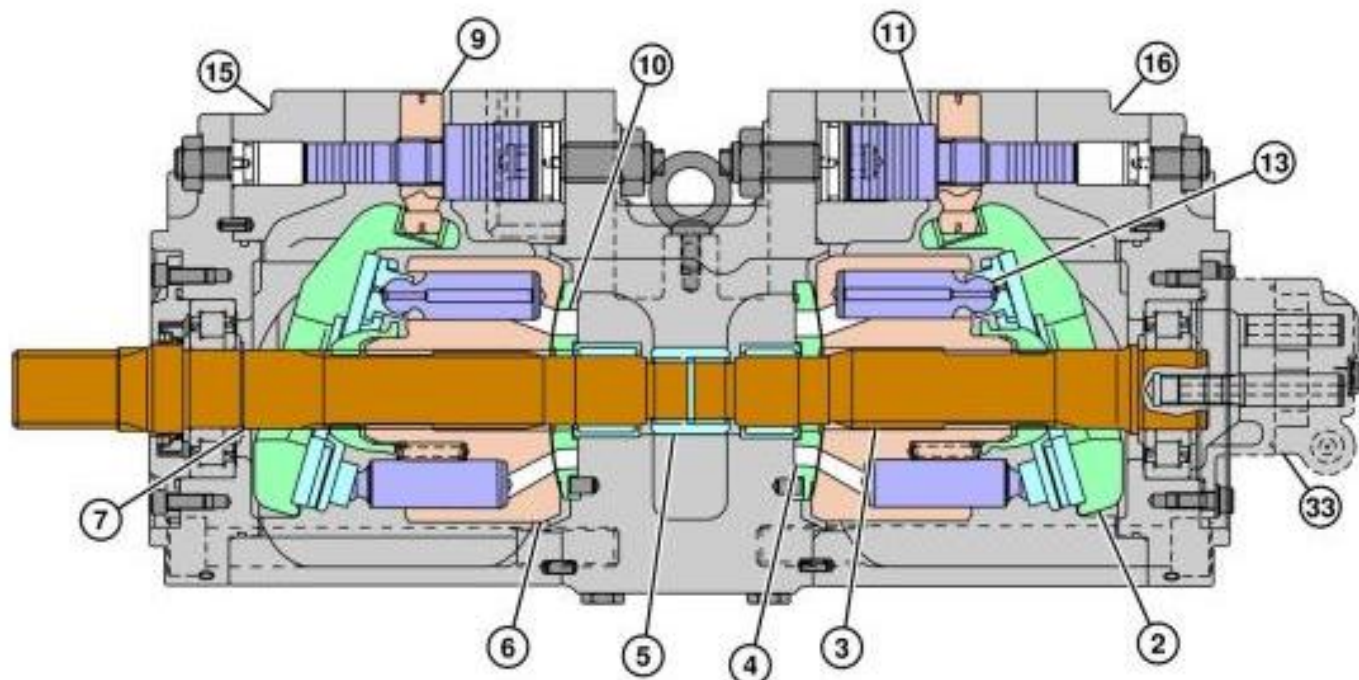
In this manual you will find detailed specifications, illustrations, schematics, diagrams and step-by-step procedures to properly service and diagnose the machine to the manufacturer's standards.

Contents:

- General Information
- Specifications
- Serial Number Location
- Engine Specifications
- Engine Diagnostics
- Engine Tests and Adjustments
- Engine Repair
- Power Train
- Transmission
- Axles
- Differential
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- Hydraulic System
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- Electrical Tests and Diagnostics
- Wiring Diagram / Schematic
- Ignition and Charging
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- 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.

Pump 1 and Pump 2 Operation



TX1125021

Hydraulic Pumps—Cross Section

LEGEND:

2	Swash Plate (2 used)
3	Pump 2 Drive Shaft
4	Supply Oil Passage
5	Spline Coupling
6	Cylinder Block (2 used)
7	Pump 1 Drive Shaft
9	Tilting Pin (2 used)
10	Inlet Oil Passage
11	Servo Piston (2 used)
13	Piston (18 used)
15	Pump 1
16	Pump 2
33	Pilot Pump

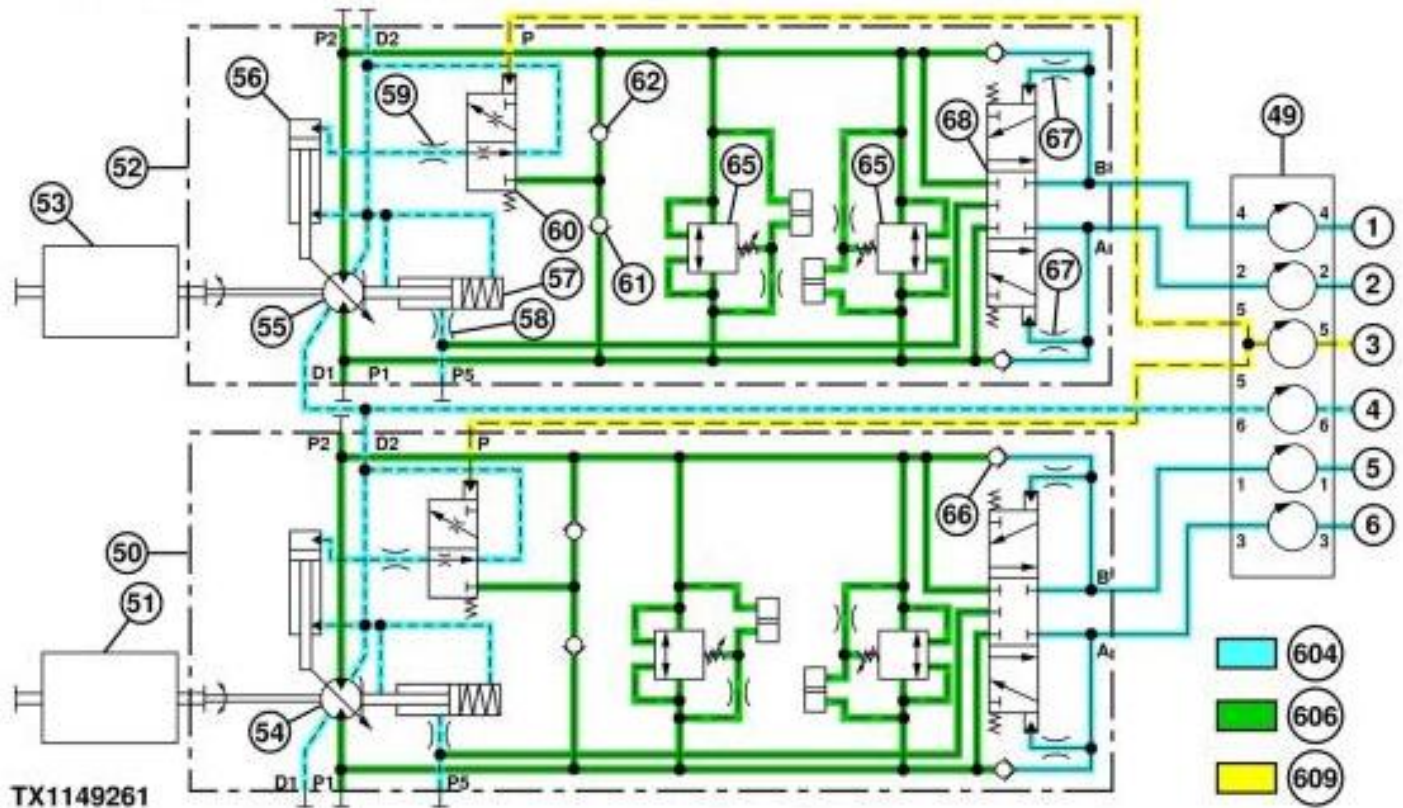
Pump 1 (15) and pump 2 (16) are mounted in-line, axial piston, variable displacement, and swash plate controlled. Engine flywheel coupling is mounted to the flywheel and rotates pump 1 drive shaft (7) at engine speed. Spline coupling (5) connects pump 1 drive shaft to pump 2 drive shaft (3). Cylinder block (6) of each pump is splined to the drive shaft. As drive shafts rotate, cylinder blocks turn and pistons (13) move in and out of cylinder block following the angle of swash plate (2).

When pistons move out of the cylinder block, oil flows from inlet oil passage (10) into piston chamber. As pistons are forced back in the cylinder block by swash plate, oil is discharged out the supply oil passage (4) to right and left control valve.

Tilting pin (9) connects each swash plate to servo piston (11) in the pump housing. Change in servo piston position directly changes swash plate angle. For more information on pump regulators, [see Pump 1 and Pump 2 Regulator Operation](#). (Group 9025-05.)

Pump displacement at a constant engine speed is varied by changing the angle of the swash plate. Increasing swash plate angle increases the distance that each piston travels into and out of the bore, which increases displacement. The greater the angle of the swash plate, the greater the piston stroke, which increases the amount of flow. Decreasing swash plate angle reduces the distance that each piston travels into and out of the bore, which decreases displacement and flow.

Travel Motor and Park Brake Valve Operation



Travel Motor and Park Brake Valve Schematic

LEGEND:

1	To Left Control Valve (travel reverse)
2	To Left Control Valve (travel forward)
3	Pilot Oil from Pilot Priority Manifold
4	Case Drain Oil to Hydraulic Oil Tank
5	To Right Control Valve (travel reverse)
6	To Right Control Valve (travel forward)
49	Rotary Manifold
50	Right Travel Housing
51	Right Travel Gear Case
52	Left Travel Housing
53	Left Travel Gear Case
54	Right Travel Motor
55	Left Travel Motor
56	Travel Speed Servo Piston (2 used)
57	Travel Park Brake (2 used)
58	Travel Park Brake Orifice (2 used)
59	Travel Speed Orifice (2 used)
60	Travel Speed Fast/Slow Valve (2 used)
61	Travel Speed Check Valve (2 used)
62	Travel Speed Check Valve (2 used)
65	Travel Motor Crossover Relief Valve (4 used)
66	Check Valve (4 used)
67	Orifice (4 used)
68	Counterbalance Valve (2 used)
604	Return Oil
606	Trapped Oil
609	Pilot Oil

Travel Motor and Park Brake Valve Components— The travel motor is an axial-piston, variable-displacement, swash plate-type motor. Travel motor consists of travel park brake (57), counterbalance valve (68), travel speed check valves (61 and 62), check valve (66), travel motor crossover relief valves (65), and a travel speed fast/slow valve (60).

Travel Motor Park Brake— The travel motor park brake is spring applied and hydraulically released. When travel function is



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for your reading.
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to get more information.