

# John Deere 345GLC Excavator Operation & Test Technical Manual (TM14303X19)

**345GLC Excavator  
Diagnostic**

(PIN: 1FF345GX\_  
\_F020001—)



JOHN HARE



COLLECTION

**OPERATION & TEST TECHNICAL MANUAL**  
**345GLC Excavator (PIN: 1FF345GX\_  
\_F020001—)**

TM14303X19 01DEC18 (ENGLISH)

For complete service information also see:

345GLC Excavator Repair ..... tm14304x19



Worldwide Construction and  
Forestry Division

**Covers:** 345GLC,1FF345GX\_,\_F020001 (7 icons)

**Type:** Service Manual

**Language:** English

**Pages:** 732

**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 345GLC Excavator Operation & Test Technical Manual (TM14303X19)**

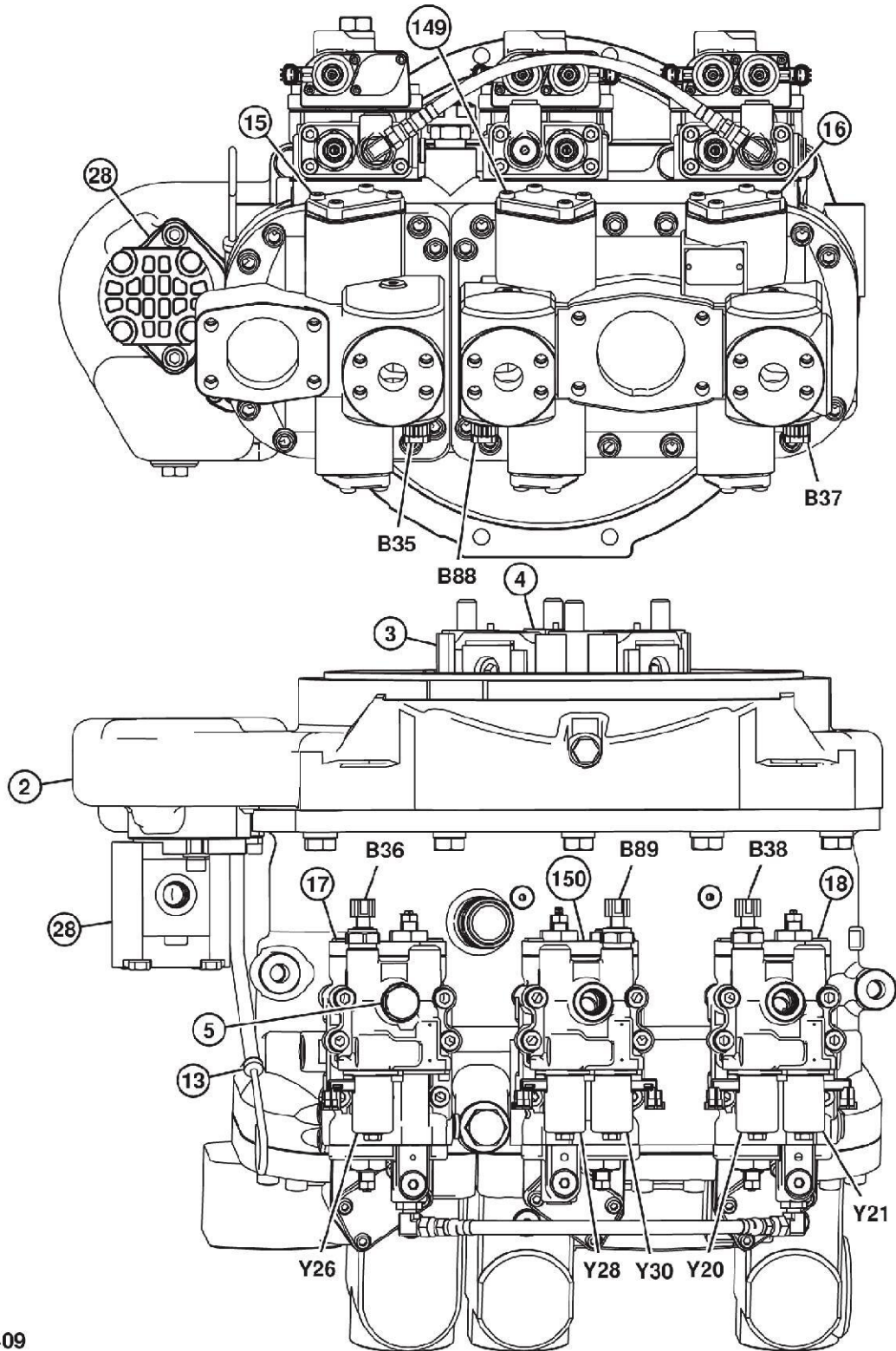
In this manual you will find detailed specifications, illustrations, schematics, diagrams and step-by-step procedures to properly service and diagnose the machine to the manufacturer's standards.

### **Contents:**

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

Pump 1, Pump 2, Pump 3, and Drive Gear Case Operation



**TX1212409**

TX1212409 UN: Pumps and Gear Case

**LEGEND:**

- 2-Pump Drive Gear Case
- 3-Damper Drive (flex coupling)
- 4-Drive Shaft
- 5-Air Bleed Plug
- 13-Dipstick
- 15-Pump 1
- 16-Pump 2
- 17-Pump 1 Regulator
- 18-Pump 2 Regulator
- 28-Pilot Pump

- 149-Pump 3
- 150-Pump 3 Regulator
- B35-Pump 1 Delivery Pressure Sensor (marked PP1)
- B36-Pump 1 Control Pressure Sensor (marked PP1)
- B37-Pump 2 Delivery Pressure Sensor (marked PP2)
- B38-Pump 2 Control Pressure Sensor (marked PC2)
- B88-Pump 3 Delivery Pressure Sensor
- B89-Pump 3 Control Pressure Sensor (marked PC3)

- Y20-Pump 2 Flow Rate Limit Solenoid (marked SB)
- Y21-Pump 1 and 2 Torque Control Solenoid (marked ST)
- Y26-Pump 1 Flow Rate Limit Solenoid (marked SA)

## Theory of Operation

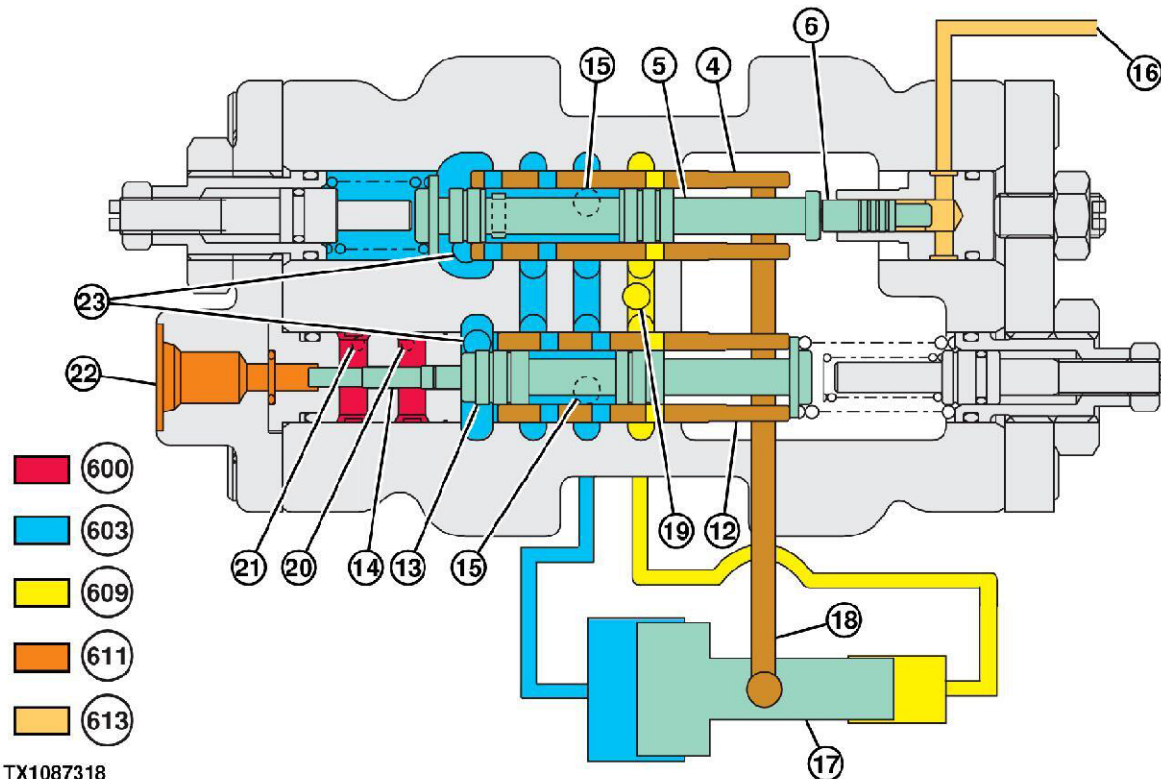
The regulators perform the following controls.

### Pump 1 and pump 2 regulators:

- Control by flow rate pilot valve
- Control by pump and partner pump delivery pressure
- Control by pilot pressure from torque control solenoid valve
- Control by pump 1 and pump 2 flow rate limit solenoid valve

### Pump 3 regulator:

- Control by flow rate pilot valve
- Control by pump 3 delivery pressure
- Control by pilot pressure from pump 3 torque control solenoid valve
- Control by pump 3 flow rate limit solenoid valve



TX1087318

TX1C87318-UN: Pump Regulator Control by Flow Rate Pilot Valve—Increasing

#### LEGEND:

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>4-Remote Control Sleeve</li> <li>5-Remote Control Spool</li> <li>6-Piston</li> <li>12-Load Sleeve</li> <li>13-Load Spool</li> <li>14-Load Piston</li> <li>15-To Large End of Servo Piston</li> </ul> | <ul style="list-style-type: none"> <li>16-From Pump Flow Rate Pilot Valve (SA, SB, or SX)</li> <li>17-Servo Piston</li> <li>18-Feedback Link</li> <li>19-Pilot Oil Inlet</li> <li>20-Pump 1 Pressure Inlet</li> <li>21-Pump 2 Pressure Inlet</li> </ul> | <ul style="list-style-type: none"> <li>22-Torque Sensing Port</li> <li>23-Return to Pump Housing</li> <li>600-High-Pressure Oil</li> <li>603-Lubrication Oil</li> <li>609-Pilot Oil</li> <li>611-Charge Oil</li> <li>613-Reduced Pilot Oil</li> </ul> |
|---|---|---|

**Pump Regulator Control by Flow Rate Pilot Valve**— Pilot oil (609) from pilot pump is constantly supplied through drilled passages in pump housing to small end of servo pistons, to pilot oil inlet (19) at each pump regulator, and to flow rate limit solenoid valves located on top of all regulators.

Pump flow rate (displacement) is changed by sending pilot oil to or releasing oil from large end of servo piston (15).

Reduced pilot oil (613) from pump 1, pump 2, and pump 3 flow rate pilot valves (SA, SB, or SX) in pilot signal manifold is sensed by piston (6) in its respective regulator.

High-pressure oil (600) from pump 1 and pump 2 is sensed through drilled passages in pump housing to pump 1 pressure inlet (20) and pump 2 pressure inlet (21) in each pump regulator.

Charge oil (611) from torque control solenoid valve is routed to the torque sensing port (22) in each pump 1 and pump 2 regulator.

Charge oil (611) from pump 3 torque control solenoid valve is routed to the torque sensing port (22) in pump 3 regulator only.

**Increasing Flow Rate (displacement)**— Actuating a function increases the flow rate valve reduced pilot oil (613) pressure from pump flow rate pilot valve (SA, SB, or SX) (16) to piston (6). Oil pressure pushes the piston and remote control spool (5) to left against the spring. Movement of spool opens a path from large end of servo piston (15) to return in pump housing (23). Pilot oil on small end of servo piston pushes the piston down, increasing pump angle, which increases flow rate (displacement). Servo piston movement is transmitted to the remote control sleeve (4) and load sleeve (12) by feedback link (18). The load sleeves move left until path to



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