# John Deere 325G Compact Track Loader Operation & Test Technical Manual - TM14291X19

**325G Compact Track Loader Diagnostic**

PIN: 1T0325G_ _ _J328658—

JOHN HARE

COLLECTION

## OPERATION & TEST TECHNICAL MANUAL

### 325G Compact Track Loader

(PIN: 1T0325G_ _ _J328658—)

TM14291X19 01DEC19 (ENGLISH)

**For complete service information also see:**

4TNV98C and 4TNV98CT Diesel Engines (Final Tier 4/ Stage IV platform) Technical Manual..... ctm120319
JDLink™ (MTG) 4G LTE Technical Manual..... tm143019
325G Compact Track Loader Repair..... 14295X19
Hydraulic Cylinders..... 19



Worldwide Construction and Forestry Division

**Covers:** 325G,1T0325G_,_J328658)

**Type:** Service Manual
**Language:** English
**Pages:** 594
**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 325G Compact Track Loader Operation & Test Technical Manual - TM14291X19**

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.

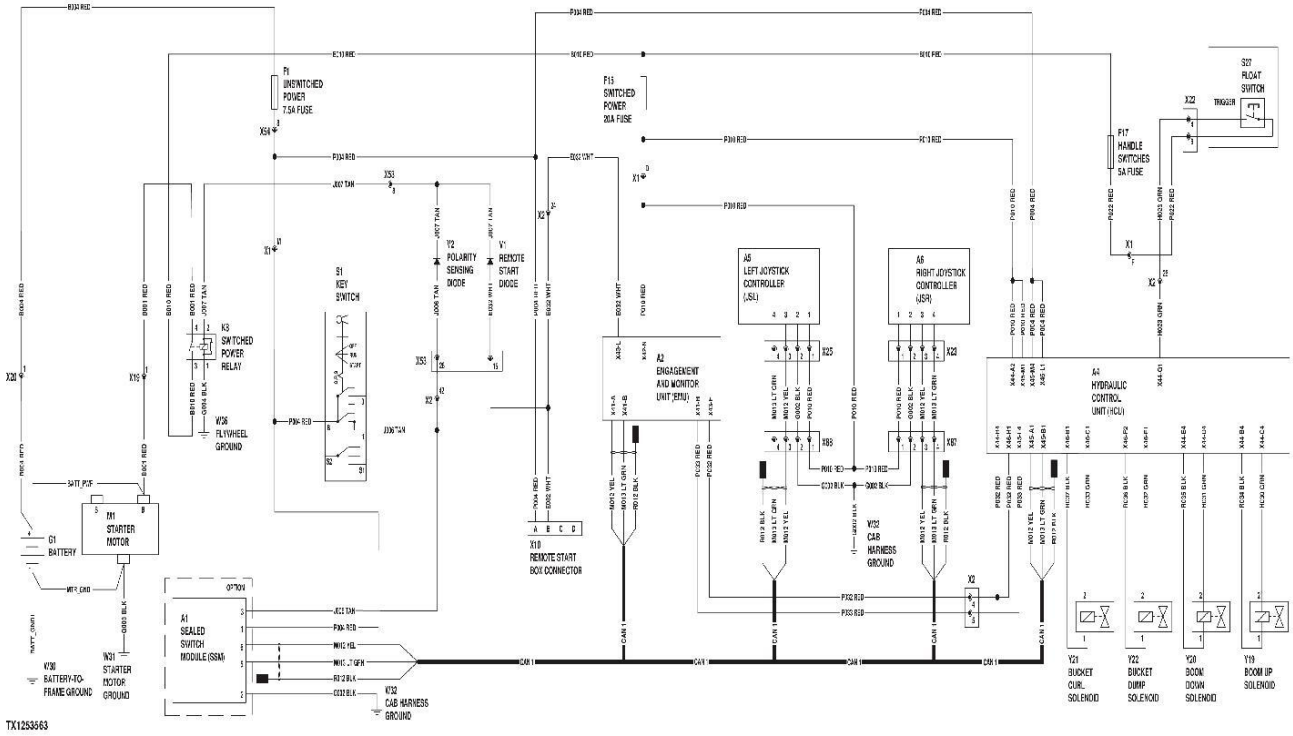
**Contents:**

- 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.

The EMU transmits hydraulic enable message based on input from the seat switch or air seat switch, interlocking seat bar switch (S5), and cab door switch (S13). For more information on switches and interlock function, see Engagement and Monitor Unit (EMU) Circuit Theory of Operation. (Group 9015-05.) The HCU disables the hydraulic system if the switched power input and the EMU CAN message do not agree. For example: switched power is supplied to HCU, but EMU is sending disable message via CAN.

The HCU controls the port lock solenoid (Y4). The port lock solenoid receives power from pin E1 of HCU 32-pin connector 3 (X46). With the port lock solenoid de-energized, all boom and bucket motion is prevented.




TX1253563-UN: Boom and Bucket Hydraulic Circuits Schematic

LEGEND:

**A1-Sealed Switch Module (SSM) (if equipped)**
**A2-Engagement and Monitor Unit (EMU)**
**A4-Hydraulic Control Unit (HCU)**
**A5-Left Joystick Controller (JSL)**
**A6-Right Joystick Controller (JSR)**
**F1-Unswitched Power 7.5 A Fuse**
**F15-Switched Power 20 A Fuse**
**F17-Handle Switches 5 A Fuse**
**G1-Battery**
**K8-Switched Power Relay**
**M1-Starter Motor**
**S1-Key Switch**
**S27-Float Switch**
**V1-Remote Start Diode**
**V2-Polarity Sensing Diode**
**W30-Battery-to-Frame Ground**
**W31-Starter Motor Ground**
**W32-Cab Harness Ground**
**W36-Flywheel Ground**
**X1-Cab Harness-to-Right Main Harness 14-Pin Connector**
**X2-Cab Harness-to-Right Main Harness 47-Pin Connector**
**X10-Remote Start Box Connector**
**X19-Right Main Harness-to-Engine Interface Harness 1-Pin Connector**
**X20-Left Main Harness-to-Battery 1-Pin Connector**
**X22-Right Joystick 12-Pin Connector**
**X23-Right Joystick Controller (JSR) 6-Pin Connector**
**X25-Left Joystick Controller (JSL) 6-Pin Connector**
**X41-Engagement and Monitor Unit (EMU) 16-Pin Connector 1**
**X42-Engagement and Monitor Unit (EMU) 14-Pin Connector 2**
**X43-Engagement and Monitor Unit (EMU) 12-Pin Connector 3**
**X44-Hydraulic Control Unit (HCU) 32-Pin Connector 1**
**X45-Hydraulic Control Unit (HCU) 48-Pin Connector 2**
**X46-Hydraulic Control Unit (HCU) 32-Pin Connector 3**
**X53-Right Main Harness-to-Left Main Harness Connector 1**
**X54-Right Main Harness-to-Left Main Harness Connector 2**
**X87-Cab Harness-to-Right Joystick Jumper Harness 6-Pin Connector**
**X88-Cab Harness-to-Left Joystick Jumper Harness 6-Pin Connector**
**Y19-Boom Up Solenoid**
**Y20-Boom Down Solenoid**
**Y21-Bucket Curl Solenoid**
**Y22-Bucket Dump Solenoid**

***Boom and Bucket Hydraulic Operation***

The hydraulic control unit (HCU) controls the loader (boom and bucket) hydraulic functions by energizing or de-energizing the boom and bucket solenoids (Y19—Y22) on the hydraulic control valve. When energized, the solenoids shift to allow pilot pressure oil (internal to the control valve) to shift the control valve spool, actuating the hydraulic function. See Hydraulic Control Valve Operation. (Group 9025-05.)

NOTE:

For component location of boom and bucket solenoids (Y19—Y22), see Right Main Harness (W4) Component Location and see Control Valve Harness (W6) Component Location. (Group 9015-10.)

The HCU energizes the valve solenoids based on operator movement of the left and right joysticks (A5 and A6).

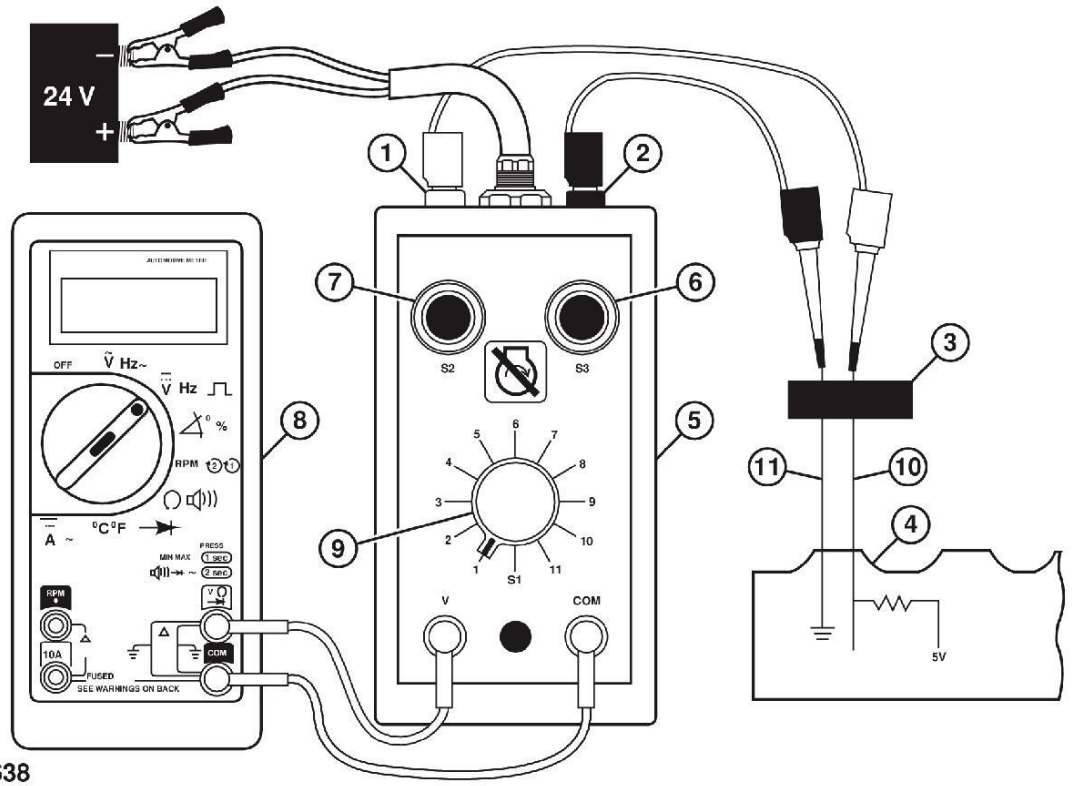
Boom and bucket functions can be calibrated if out of adjustment. See Boom and Bucket Calibration. (Group 9015-20.)

***Joystick Controllers (A5 and A6)***

## Two Wire Sensor Circuit Check—Out of Range Low

This condition can be caused by:

Signal wire short to ground
Sensor malfunction




**TX1137638**

TX1137636-UN: Two Wire Test Box Setup

LEGEND:

**1-Terminal A (yellow)**
**2-Terminal B (blue)**
**3-Sensor Harness Connector**
**4-Control Unit**
**5-JDG10273 Diagnostic Test Box**
**6-S3 Switch**
**7-S2 Switch**
**8-Digital Multimeter**
**9-S1 Switch**
**10-Signal Wire**
**11-Ground Wire**

1. Perform Setup and Functional Test. (Group 9015-17.)
2. Disconnect sensor.
3. Using wire leads and flex probe kit, connect JDG10273 Diagnostic Test Box (5) to terminals of sensor harness connector (3) as follows:

   Test box V terminal to digital multimeter (8) V+ terminal
   Test box COM terminal to digital multimeter COM terminal
   Test box terminal A (1) to sensor harness connector signal wire terminal
   Test box terminal B (2) to sensor harness connector ground wire terminal

4. Connect Service ADVISOR™. See Service ADVISOR™ Connection Procedure. (Group 9015-15.)
5. View appropriate Service ADVISOR™ reading as indicated by diagnostic procedure.
6. Set digital multimeter to measure voltage.
7. Set S1 switch (9) on test box to number as indicated by diagnostic procedure.
8. Compare voltage on digital multimeter to Service ADVISOR™ reading.

| Result | Condition | Action |
|---|---|---|
| Voltages match (within 0.2 volts). | Sensor malfunction. | Replace sensor. |
| Digital multimeter is less by 0.2 volts. | Signal wire is short to ground. | Repair signal wire. |

Service ADVISOR is a trademark of Deere & Company

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