


John Deere 2954D Processor Diagnostic, Operation and Test Service Manual (TM10333)



2954D Processor Diagnostic

JOHN HARE

COLLECTION

OPERATION AND TEST MANUAL
Processor models 2954D
TM10333 10 NOV 15 (ENGLISH)

For complete service information also see:

JDLINK (MTG) Technical Manual	TM114519
2954D Processor Repair	TM10409
PowerTech 4045, 6068 Diesel Engine Level 14 Electronic Fuel System with the Denso High Pressure Common Rail (HPCR) Level 14 ECU	CTM320
Super Caddy Oil Cooler	CTM310
PowerTech 4.5L & 6.0L Diesel Engines, Tier 3/Stage I	

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John Deere Construction and Forestry
Printed by Belgreen

TM10333

Covers: 2954D

Type: Service Manual

Language: English

Pages: 747

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 2954D Processor Diagnostic, Operation and Test Service Manual (TM10333)**

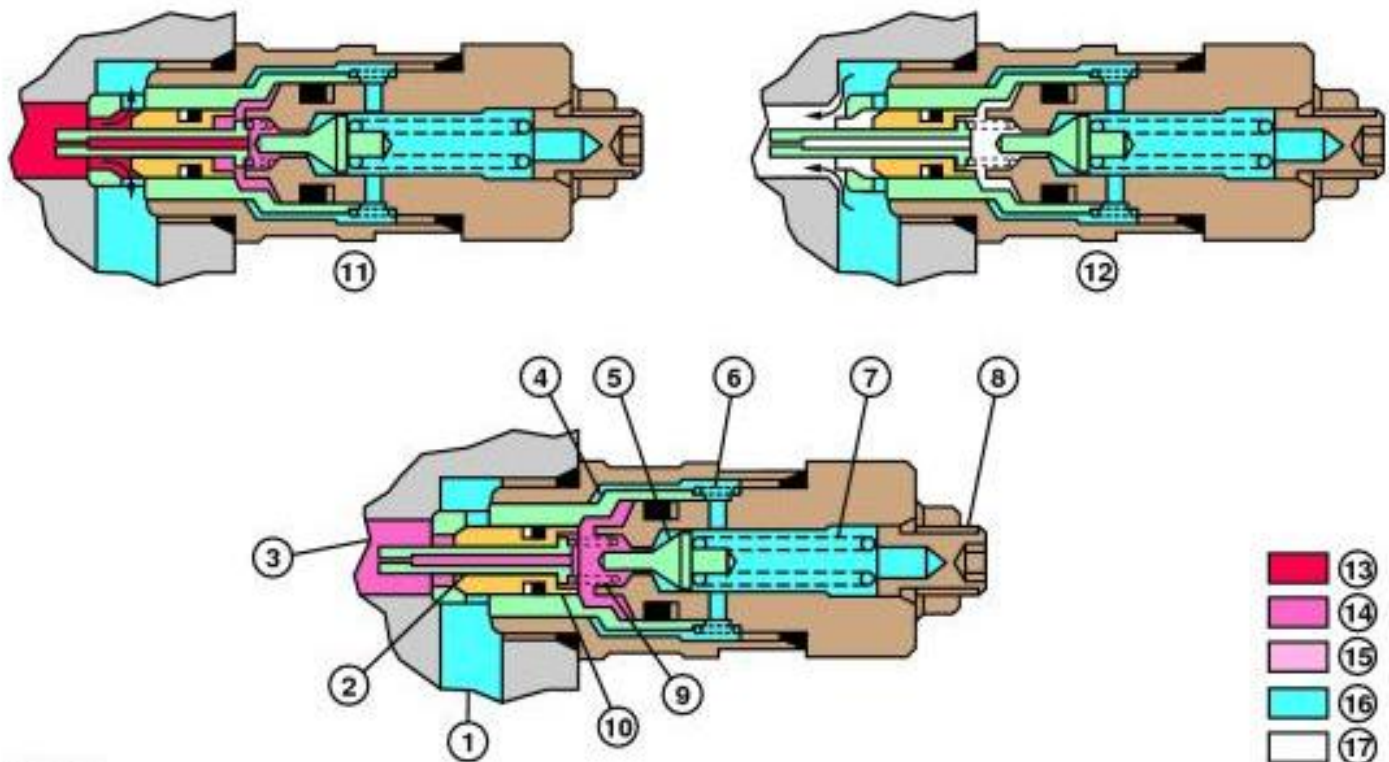
In this manual you will find detailed specifications, illustrations, schematics, diagrams and step-by-step procedures to properly service and diagnose the machine to the manufacturer's standards.

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.

Circuit Relief and Anticavitation Valve Operation



T143483

Circuit Relief and Anticavitation Valve

LEGEND:

1	To Return
2	Piston
3	From Work Circuit
4	Anticavitation Valve
5	Pilot Poppet
6	Check Valve Spring
7	Pilot Poppet Spring
8	Screw
9	Piston Spring
10	Main Poppet
11	Relief Operation
12	Anticavitation Operation
13	Relief Pressure Oil
14	Supply Oil
15	Reduced Pressure Oil
16	Return Oil
17	Low Pressure Oil (cavitation)

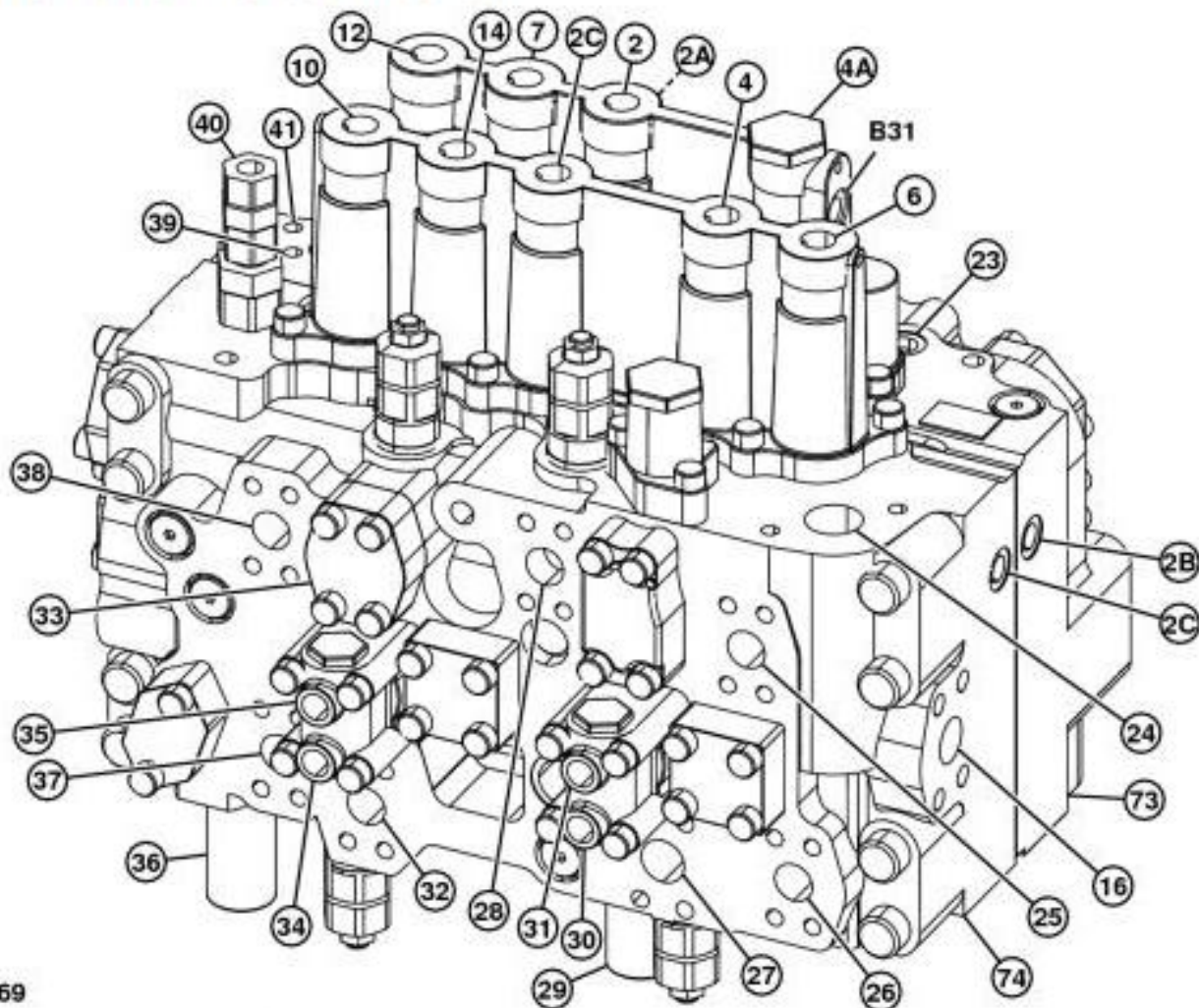
The circuit relief valves are pilot operated relief valves and include a anticavitation valve.

At pressures below the circuit relief setting, the main poppet (10) remains closed. In relief operation (11), the relief valve opens in three steps.

1. In the first step, the pilot poppet (5) is opened. Flow restriction through the hollow piston (2) causes the pressure in the cavity behind the main poppet to decrease.
2. In the second step, the piston seats against the pilot poppet (5). The seating of piston further reduces oil flow into the cavity and greatly decreases the pressure against the back side of main poppet.
3. In the third step the main poppet opens.

During anticavitation operation (12), the anticavitation valve (4) retracts to allow oil to flow from the return passage into the work circuit. During normal operation, the supply oil (14) on the inner shoulder holds the anticavitation valve against its seat. As the pressure in the work circuit decreases the pressure holding the anticavitation valve closed also decreases. The return oil (16) on the outer shoulder pushes the anticavitation valve, main poppet, and piston against the springs to open the valve.

Control Valve Line Identification



TX1024069

Left Control Valve Line Identification

LEGEND:

- 2 From Pilot Signal Manifold (port 2)—Boom Down
- 2A To Boom Lower Meter-In Cut Valve and Switch Valve of Boom Flow Rate Control Valve (boom 1 to boom 2 pilot oil)
- 2B Boom Lower Meter-In Cut Valve to Rear of Right Control Valve and Bypass Shutoff Valve (boom 1 to boom 2 pilot oil)
- 2C Rear of Left Control Valve To Boom 2 Top Pilot Cap (boom 1 to boom 2 pilot oil)
- 4 From Pilot Signal Manifold (port 4)—Arm In
- 4A Plug and Pilot Oil from Arm 1 By Drilled Passage in Control Valve Housing
- 6 From Pilot Signal Manifold (port 6)—Swing Right
- 7 From Pilot Signal Manifold (port 7)—Secondary Supply Oil for Processor From Pump 1
- 10 From Pilot Signal Manifold (port 10)—Left Travel Reverse
- 12 From Pilot Signal Manifold (port 12)—Right Travel Reverse
- 14 From Pilot Signal Manifold (port 14)—Primary Supply Oil for Processor From Pump 2
- 16 From Pump 2 to Left Control Valve (5-spool)
- 23 To Switch Valve of Arm 2 Flow Rate Control Valve (pilot oil from arm regenerative solenoid valve, port 5C, to arm regenerative valve and switch valve)
- 24 To Hydraulic Oil Cooler Top Port
- 25 To Swing Motor (port B)—Left Swing
- 26 To Swing Motor (port A)—Right Swing
- 27 To Arm Cylinder Head End—Arm In
- 28 To Arm Cylinder Rod End—Arm Out
- 29 To Solenoid Valve Manifold (port DZ) by Tee Fitting (dig regenerative valve not used this application)
- 30 To Solenoid Valve Manifold (port DE)
- 31 From Arm 1 Flow Rate Pilot Valve (pilot signal manifold port SE)
- 32 To Manifold, Latch Line Port, Processor Supply Filter and Bypass Valve, and Processor Control Valve—Processor Primary Supply Oil From Pump 2
- 33 Plate (port not used)
- 34 To Solenoid Valve Manifold (port DY)
- 35 To Solenoid Valve Manifold (port DY)



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