210
SECTION 290—OPERATOR'S CAB
Group 10—Operational Check-Out
Group 15—Tests and Adjustments
Group 20—Operation

220
SECTION 299—SPECIAL TOOLS (Dealer-Fabricated)
Group 05—Special Tools (Dealer-Fabricated)

230

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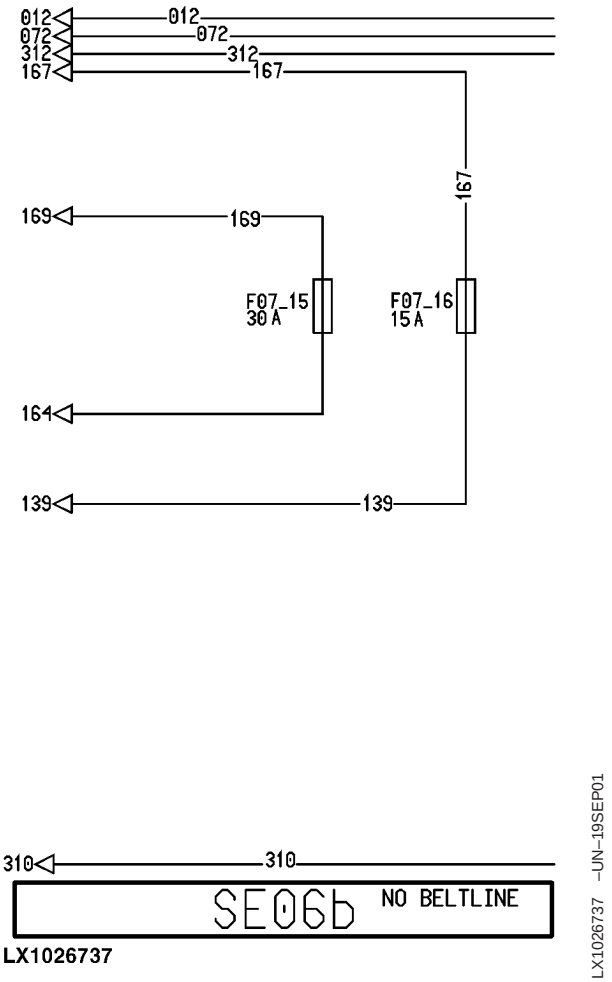
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SE6B-Functional schematic

F07/15—Fuse (W08)
F07/16—Fuse (W08)



Continued on next page

LX23006,000013C –19–27FEB02–8/14

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A17—CAN BUS terminator with power supply (W16)
A30—Electronic control unit SIC (W16)
B115—E-SCV encoder (W16)
H85—Indicator light for E-SCV (W16)
K02/5—Relay for power supply to E-ICV (W08)
F03/10—Fuse (W08)
F03/13—Fuse (W08)
F03/15—Fuse (W08)
S64—E-ICV multi-function lever (W16)
S65—Switch for E-ICV transport lock (W16)
S91—Switch for E-SCV 1 (W12)
S97—Switch for E-SCV 2 (W12)
S98—Switch for E-SCV 3 (W12)
S99—Switch for E-SCV 4 (W12)
S110—Switch for E-SCV transport lock (W16)
X219—6-pin plug (multifunction lever connection point; W16)
X220—8-pin plug (multifunction lever connection point; W16)
X225—3-pin plug (connection point for transport lock switch; W16)
X226—7-pin plug (connection point of CAN BUS terminator; W16)
X263—15-pin plug (multifunction lever connection point; W16)
X264—3-pin plug (front loader connection point)
X423—16-pin plug (SIC connection point; W12, W16)
X428—16-pin plug (SIC connection point; W08, W16)
X436—4-pin plug (connection point for E-SCV 1 switch; W12)
X437—4-pin plug (connection point for E-SCV 2 switch; W12)
X438—4-pin plug (connection point for E-SCV 3 switch; W12)
X439—4-pin plug (connection point for E-SCV 4 switch; W12)
X456—45-pin plug (SIC connection point; W16)
X552—6-pin plug (E-SCV encoder connection point; W16)
X553—3-pin plug (connection point for E-SCV transport lock; W16)
X554—2-pin plug (connection point for E-SCV indicator light; W16)

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SE21-Diagnostic schematic

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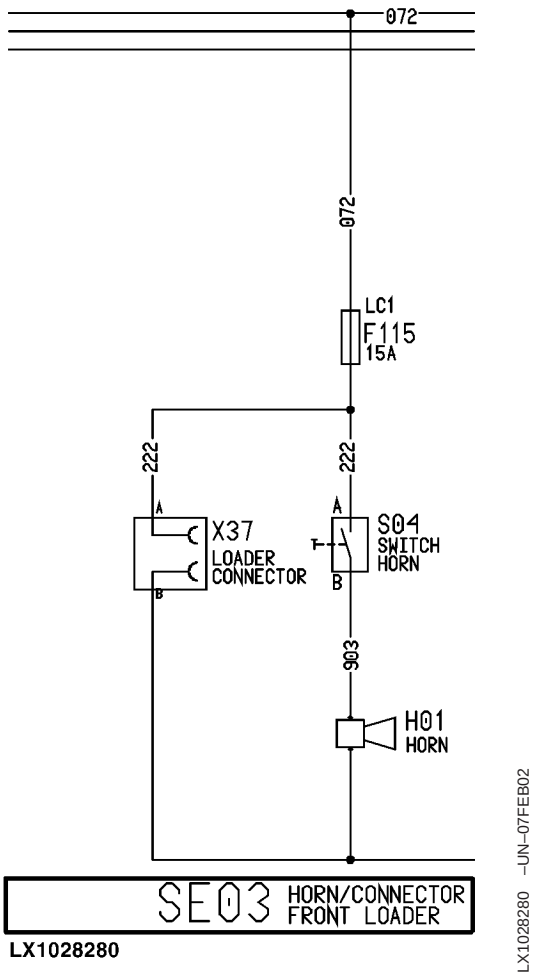
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SE3-Functional Schematic

F115—Fuse (W08)
H01—Horn (W02)
S04—Horn button (W09)
X37—2-pin plug for front loader (W08)
X66-1—1-pin plug for horn (W02)
X66-2—1-pin plug for horn (W02)
X288—10-pin plug (engine harness connection point; W08, W02)
X504—42-pin plug (cowl harness connection point; W08, W09)



Continued on next page

LX16226,00004B8 –19–24JUN02–2/4

E07—Left cab frame light (W20)
E08—Right cab frame light (W20)
F022/1—Fuse (W08)
F022/2—Fuse (W08)
F022/3—Fuse (W08)
K024/1—Relay for worklights or headlights (W08)
K024/2—Relay for lights on cab frame (W08)
S11—Headlight switch (W08)
X110—2-pin plug for left cab frame light (W20)
X111—2-pin plug for left cab frame light (W20)
X115—2-pin plug for right cab frame light (W20)
X116—2-pin plug for right cab frame light (W20)
X260—10-pin plug (worklight switch connection point; W08)
X400—42-pin plug (cab roof connection point; W08, W19)
X442—6-pin plug (harness connection point for turn-signal and clearance lights, right; W19, W20)
X443—6-pin plug (harness connection point for turn-signal and clearance lights, left; W19, W20)
X515—6-pin plug for hazard warning light switch (W09)

SE6D-Diagnostic Schematic

240
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49

LX16226,0000607 –19–28MAY02–10/10

Reference 240-15-018, SE16G — Basic Control Unit (BCU) (HMS)

LX16226,00004ED –19–01FEB02–1/1

Component checks

Perform the following resistance and/or current draw tests:

– – –1/1

Alternator relay (K02/2)	Remove the relay for the alternator from the corresponding relay box. Use the JT05791A multimeter to measure the resistance at the relay between pin 85 (2) and 86 (1): **Alternator relay (K02/2)—Specification** Relay coil:—Resistance ..... approx. 75 - 90 Ω Relay coil not under current:—Continuity ..... 30 (3) and 87 (5) open Continuity..... 30 (3) and 87A (4) closed Relay coil under current:—Continuity ..... 30 (3) and 87 (5) closed Continuity..... 30 (3) and 87A (4) open Pins 87 (5) and 87A (4) should never have continuity.	**OK:** The relay is OK. **NOT OK:** Replace the relay. – – –1/1
HMS switch (S43)	*NOTE: Unplug the HMS switch from the wiring harness.* Use the JT05791A multimeter to check for continuity between switch pins A and B, and pins A and C respectively: The switch consists of a change-over contact. When the switch is actuated, it has to change over. **HMS switch (S43)—Specification** Switch not activated:—Continuity..... B and C closed Continuity..... A and B open Switch activated:—Continuity..... B and C open Continuity..... A and B closed Pins A and C should never have continuity.	**OK:** Switch is OK. **NOT OK:** Replace the switch. – – –1/1

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35

Reference 240-25B-003, Designation of Parts Shown in Functional Schematic and Harness Diagram

A14 — CAN-BUS terminator with power supply (SE22; W08)
A15 — CAN BUS terminator (SE22; W08)
A19 — Cruise control potentiometer (SE23; W08)
A29 — Seat with compressor and heater (SE4; W08)
A54 — Engine control unit (ECU) (SE23; W15)
A55 — Electronic control unit BCU (SE16; W08)
B01 — Rev counter sender (SE16F; W02)
B02 — Restricted air cleaner indicator sender (SE2; W02)
B03 — Fuel gauge sender (SE2; W08)
B04 — Engine oil pressure sender (SE2; W02)
B05 — Handbrake switch (SE2; W08)
B06 — PTO speed sender (SE16F; W30)
B07 — Oil filter warning light sender (SE2; W28)
B08 — Coolant temperature gauge sender (SE2; W02)
B19 — Right draft sensor (SE15; W30)
B20 — Left draft sensor (SE15; W30)
B21 — Position sensor (SE15; W08)
B26 — Height sensitivity potentiometer (SE15; W08)
B27 — Position feedback unit (SE15; W08)
B29 — Low temperature switch (SE2; W28)
B30 — High temperature switch (SE2; W28)
B31 — Engagement oil warning light sender (SE2; W28)
B35 — Wheel speed sender (SE16F; W30)
B36 — Neutral start switch (SE1; W28)
B57 — Foot Throttle Potentiometer (SE23; W09)
B58 — Front PTO speed sender (SE16F; W07)
B59 — Manifold air temperature sender (SE23; W02)
B64 — Hand throttle potentiometer (SE23; W12)
B69 — Coolant temperature sender (SE23; W02)
B72 — Crankshaft speed sender (SE23; W02)
B88 — Brake switch (SE16J; W08)
B114 — Fuel temperature sender (SE23; W02)
D31 — Diode for electrical starting aid (SE1B; W03)
E01 — Right headlight (SE6A; W04)
E02 — Left headlight (SE6A; W04)
E03 — Left clearance light (SE6A; W08)
E04 — Right clearance light (SE6A; W08)
E09/L — Worklight at left front corner (SE7; W04)
E09/R — Worklight at right front corner (SE7; W04)
E13 — Left tail light (SE6A; W08)
E14 — Right tail light (SE6A; W08)
E15/L — Worklights on fenders, left rear (SE7; W08)
E15/R — Worklights on fenders, right rear (SE7; W08)
E16/L — Worklights on fenders, left front (SE7; W08)
E16/R — Worklights on fenders, right front (SE7; W08)
E21 — License plate light (SE6A; W08)
F09 — Fuse (SE1B; W03)
F11 — Fuse (SE1B; W03)
F13 — Fuse (SE1; W01)
F14 — Fuse (SE1; W01)
F21/1 — Fuse (SE7; W08)
F21/2 — Fuse (SE23; W08)
F21/3 — Fuse (SE23; W08)
F101 — Fuse (SE1; W08)
F102 — Fuse (SE1; W08)
F103 — Fuse (SE1A; W08)
F104 — Fuse (SE16; W08)
F105 — Fuse (SE16E; W08)
F106 — Fuse (SE16E; W08)
F107 — Fuse (SE16H; W08)
F108 — Fuse (SE16J; W08)
F109 — Fuse (SE6A; W08)
F110 — Fuse (SE6A; W08)
F111 — Fuse (SE6A; W08)
F112 — Fuse (SE6A; W08)
F113 — Fuse (SE6A; W08)
F114 — Fuse (SE6A; W08)
F115 — Fuse (SE3; W08)
F116 — Fuse (SE14; W08)
F117 — Fuse (SE14; W08)
F118 — Fuse (SE2; W08)
F119 — Fuse (SE4; W08)
F120 — Fuse (SE7; W08)
G01 — Battery (SE1; W01)
G02 — Alternator (SE1; W02, W03)
H01 — Horn (SE3; W02)
H19 — Front PTO indicator light (SE16B; W08)
H32 — Left brake light (SE16J; W08)
H33 — Right brake light (SE16J; W08)
H34 — Left front turn signal (SE16E; W08)
H35 — Left rear turn signal (SE16E; W08)
H42 — Right front turn signal (SE16E; W08)
H43 — Right rear turn signal (SE16E; W08)

240
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Continued on next page

XGND9 Ground point

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
(-)	310CB-4	black	X79-B, X02-D, X575-2
(-)	310CP-2.5 ...	black	X305-A
(-)	310CQ-1	black	X70-2
(-)	310CR-1.5 ...	black	X547-10
(-)	310CS-1	black	X66/2-A
(-)	310CT-1	black	X411-G
(-)	310CU-1	black	X411-F



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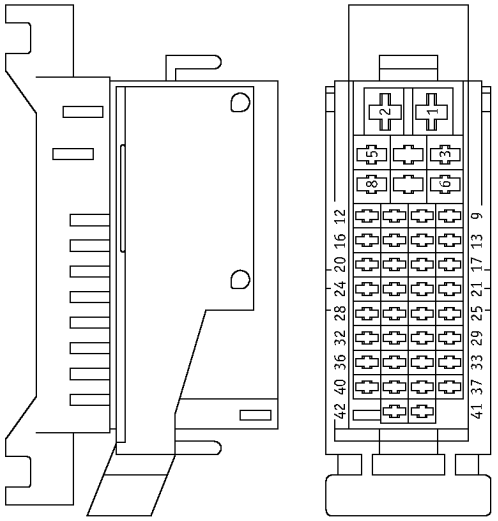
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X400 42-pin plug — Connection point for cab roof wiring harness (W19)

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
1	vacant		
2	129AC-1.5	white	K08/4-87, X248-10
3	146A-1	light blue	X472/1-B
4	147AA-1.5	purple	X248-20, X472/1-D
5	136A-1	light blue	X472/2-B
6	187AA-1.5	purple	X248-18, X472/2-D
7	232A-2.5	red	F03/16A
8	vacant		
9	118AD-1	gray	X430-24, F07/02A, X106-B, F07/10A
10	128AA-1	gray	X430-37, F07/11A, X107-B, F07/03A, X171/2F-A
11	107AD-1	purple	X483/2-2, X483/2-25, X430-26
12	125AD-1	dark green	X483/2-27, X430-23, X483/2-5
13	999A-0.5	white	X545-A
14	138AC-1	gray	F06/05A, X403-19, X483/1-4
15	912AB-1	red	F05/12A, X544-A
16	246AC-1	light blue	F05/09A, X40-A
17	275A-1	dark green	X40-B
18	239A-1	white	X40-C
19	294A-1	yellow	X40-D
20	971A-1	brown	F04/12A
21	050AW-1	black	XGND6
22	137AC-1	purple	X260-H, X248-19
23	vacant		
24	257A-1	purple	F06/04A
25	vacant		
26	174A-1	yellow	F07/13A
27	184AB-1	yellow	F07/14A, X248-11
28	274A-1	yellow	X544-B
29	181AB-1	brown	F05/10A, X132-6
30	vacant		



LX1025825

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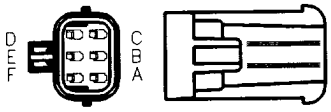
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LX25599,00003C8 –19–01OCT02–65/111

X40 6-pin plug, connection point for rear window wiper harness (W24)

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
A	246AB-1	light blue	F05/09A, X400-16
B	275A-1	dark green ...	X400-17
C	239A-1	white	X400-18
D	294A-1	yellow	X400-19
E	258A-1	gray	X44-A
F	vacant		



LX1017893

LX1017893 –UN–10OCT97

240
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LX25599,00003CA –19–01OCT02–32/112

X44 2-pin plug for rear window washer pump

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
A	258A-1	gray	X40-E
B	310BJ-1	black	XGND45



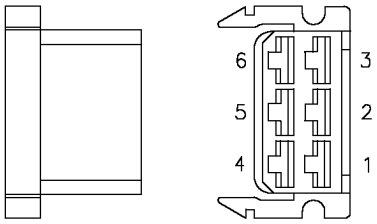
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X50 6-pin plug — Connection point for fan and air conditioner wiring harness (W26)

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
1	231A-2.5	brown	F05/14A
2	222A-2.5	red	F05/13A
3	205A-1	dark green ...	K09/4-87
4	213A-1	orange	X450-25
5	226AB-1	light blue	K10/1-85, K09/4-85
6	vacant		



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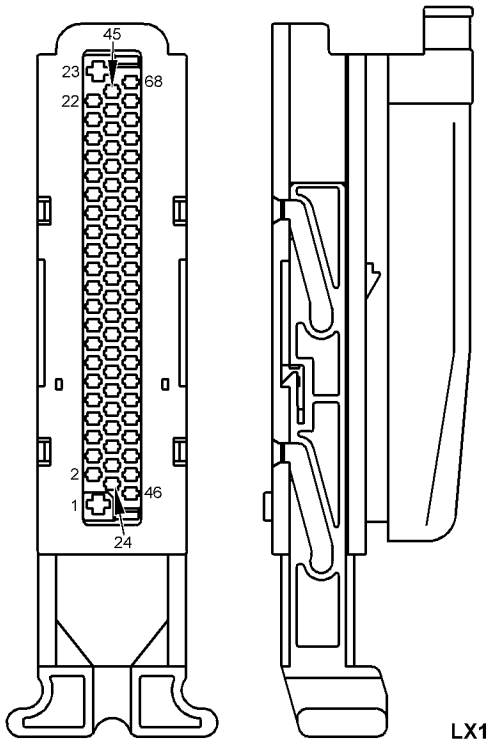
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LX25599,00003CA –19–01OCT02–34/112

X483/1 68-pin plug for basic control unit (BCU), continued

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
41	557A-1	purple	X245-A
42	244A-1	yellow	X324-C
42	vacant		
44	934AA-0.5	yellow	X450-41, R19-A, X571-C
45	245A-1	dark green	X324-D
46	834A-1	yellow	X14/1-F
47	838A-1	gray	X14/1-D
48	839A-1	white	X14/1-G
49	vacant		
50	vacant		
51	885A-0.5	dark green	X430-13
52	884A-0.5	yellow	X430-11
53	869A-1	white	X14/2-B
54	875A-1	dark green	X14/1-C
55	876A-1	light blue	X14/1-H
56	877A-1	purple	X14/1-E
57	878A-0.5	gray	X430-18
58	vacant		
59	325A-0.5	dark green	X450-9
60	341A-0.5	brown	X504-21
61	574A-0.5	yellow	X430-32
62	vacant		
63	502A-0.5	red	X430-40
64	501A-0.5	brown	X505-25
65	301A-0.5	brown	X450-34
66	vacant		
67	873AC-1	orange	X14/2-C, X14/1-B, X430-9, X430-12
68	vacant		



LX1024560

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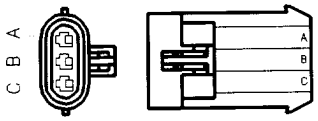
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LX16226,0000653 –19–01OCT02–53/69

X477 3-pin plug for range-shift switch

Terminal no.	Wire no. and cross section	Color of wire	To plug or component
A	513T-1	orange	X441-1
B	561T-1	brown	X441-2
C	572TD-1	red	X441-6, X249-C, X244-B



LX1017884

LX1017884 –UN–10OCT97

LX25599,0000227 –19–01JAN02–6/6

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❸ **Checking the Individual Control Units**	**Digital display:** Move the turn signal lever up or down (to positions for left or right turn signals). **Performance monitor:** Press the “2” button or the “0” button. **Display:** The first control unit appears on the display. e.g. **BCU : NONE** or e.g.: **BCU : CODE**	**OK:** If display shows: “NONE”, GO TO: 4. **NOT OK:** If display shows: “CODE”, GO TO: 5. – – –1/1

❹ **No Diagnostic Trouble Codes are Stored (NONE)**	**Digital display:** Move the turn signal lever up or down (to positions for left or right turn signals). The next control unit appears on the display. **Performance monitor:** Press the “2” button or the “0” button. The next control unit appears on the display.	**OK:** Check the next control unit, GO TO: 3. **OK:** Exit the ALL mode, GO TO: 7. **OK:** GO TO: Calling up and confirming a control unit. **OK:** GO TO: Aborting or completing the program mode. – – –1/1

Address BCU030	**Engine speed sending unit** Input = 0000	**OK:** Confirm the input. **NOT OK:** Correct the input.
	Wheel speed sending unit Inductive sender (all tractors without creeper): Input = 0000 Hall sender (all tractors with creeper or AutoPowr/IVT-transmission): Input = XX0X *NOTE: X stands for a displayed digit.*	**OK:** Confirm the input. **NOT OK:** Correct the input.
	Rear PTO speed sending unit Input = 0000	**OK:** Confirm the input. **NOT OK:** Correct the input.
	Front PTO speed sending unit Input = 0000	**OK:** Confirm the input. **NOT OK:** Correct the input.

– – –1/1

245
BCU
4

Address BCU031 — Basic functions, reverse drive lever control function

– – –1/1

Address BCU031	Tractors with AutoPowr/IVT transmission: Input = 000 Tractors with PowrQuad Plus or AutoQuad transmission: Input = 001 Tractors with electric shifting of gears and ranges: Input = 002	**OK:** Confirm the input. **NOT OK:** Correct the input.

– – –1/1

Address BCU034 - Basic functions, LTC coolant pump control function

– – –1/1

Address BCU034	Without pump: Input = 000 With pump: Input = 001	**OK:** Confirm the input. **NOT OK:** Correct the input.

– – –1/1

Circuit/harness test for rockshaft control stepper motor (M08)

Instructions for diagnosis:
For component location and pin arrangement see:
- Reference 240-26-004, Wiring Harnesses for 6120, 6220, 6320, 6420 and 6520 Tractors with PowrQuad Plus Transmission and Stage I Engine to 97/68/EC — Summary of References.
- Reference 240-26-005, Wiring Harnesses for 6320, 6420 and 6520 Tractors with AutoQuad Transmission and Stage I Engine to 97/68/EC — Summary of References.
- Reference 240-26-002, Wiring Harnesses for 6420S, 6620, 6820, 6920 and 6920S Tractors with PowrQuad Plus or AutoQuad Transmissions and Stage I Engine to 97/68/EC — Summary of References.
- Reference 240-26-003, Wiring Harnesses for Tractors with AutoPowr/IVT Transmission and Stage I Engine to 97/68/EC — Summary of References.
- Reference 240-26-501, Wiring Harnesses for Tractors with PowrQuad Plus or AutoQuad Transmissions and Stage II Engine to 97/68/EC — Summary of References.
- Reference 240-26-502, Wiring Harnesses for Tractors with AutoPowr/IVT Transmission and Stage II Engine to 97/68/EC — Summary of References.

For circuit diagram refer to:
- Reference 240-10-016, SE15 Electronic Hitch Control Unit.

Circuit/harness test:
Most wiring harness problems are caused by connector problems (contacts loose/bad/slid back) and/or bad ground connections. **Before a detailed circuit check is performed** and **in the case of occasional circuit problems (loose contacts),** all components of the respective circuit must be checked (see procedure for “Preliminary Check of BCU Circuit” in Section 245, Group BCU).

245 BCU ,143

Layout of leads for rockshaft control stepper motor (M08)			
Circuit diagram SE 15	**Wiring harness W30 at rear end of transmission**	**Connecting point between W30 and W08**	**Cab wiring harness W08**
Lead	from	via	to
Lead 859 (control lead)	X92 - Pin A (stepper motor)	X430 - Pin 22 (connecting point)	X483-2 - Pin 12 (BCU)
Lead 858 (control lead)	X92 - Pin B (stepper motor)	X430 - Pin 21 (connecting point)	X483-2 - Pin 13 (BCU)
Lead 855 (control lead)	X92 - Pin C (stepper motor)	X430 - Pin 16 (connecting point)	X483-2 - Pin 14 (BCU)
Lead 854 (control lead)	X92 - Pin D (stepper motor)	X430 - Pin 15 (connecting point)	X483-2 - Pin 15 (BCU)

IMPORTANT: When ignition is ON, disconnected plugs may cause additional diagnostic trouble codes. The fault memory must be cleared once the circuit/harness test has been completed.

– – –1/1

IMPORTANT: When ignition is ON, disconnected plugs may cause additional diagnostic trouble codes. The fault memory must be cleared once the circuit/harness test has been completed.

–19– –2/2

❶ **Check the harness (W28 at front end of transmission)**	 **LX1017904** LX1017904 –UN–10OCT97 *X307 2-pin plug for hydraulic oil temperature sender* **1.1 - Harness test:** • Pull out the 2-pin plug (X307) for the hydraulic oil temperature sender. • This test must be performed at plug X307 (harness W28 at front end of transmission). Access address BIF 15: **BIF 15 –– Voltage, hydraulic oil temperature sender (B60)—Specification** Plug disconnected:—Voltage ..... 4.00 volts Pin A (lead 602, signal lead) bypassed to pin B (ground):—Voltage ..... 0.00 volts	**OK:** Replace the hydraulic oil temperature sender and carry out an operational check. **NOT OK:** GO TO 1.2
	1.2 - Check the supply voltage: Use a JT05791A multimeter to check the supply voltage at plug X307: **Supply voltage for hydraulic oil temperature sender to plug X307—Specification** between pin A (lead 602) and any suitable ground point:—Voltage ..... 4 volts	**OK:** GO TO 2. **NOT OK:** Check signal lead circuit (lead 602) (see table for layout of leads). Repair as needed and carry out an operational test. – – –1/1

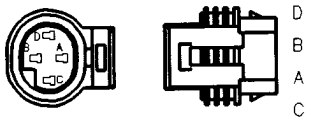
245 BIF 14

Reference 245-PLC-102, Circuit Test for Transmission Output Speed Sender (B84)

LX25546,000049D –19–01SEP02–1/1

Operational test for transmission output speed sender (B84)

– – –1/1

❶ **Checking the transmission output speed sender (B84)**	*NOTE: Transmission output speed sender (B84) cannot be tested in diagnostic mode while the tractor is being driven. For more detailed information, see Reference 245-05-005, Driving in the Diagnostic Mode.*  **LX1017903** LX1017903 –UN–10OCT97 *X375 4-pin plug for transmission speed sender in harness W28 at front end of transmission* • Remove transmission output speed sender B84 and look for signs of dirt. • Put plug X375 back on (sender removed). • Access address PLC 04. • Move a screwdriver blade rapidly back and forth in front of the sending unit. The display alternates between “0” and “1”: **PLC 04 –– Status, transmission output speed sender B84—Specification** Signal exists:—Status XX1/0	**OK:** • Test completed. • Type of error indicates a loose contact, GO TO: Circuit/harness test for transmission output speed sender (B84). **NOT OK:** GO TO: Circuit/harness test for transmission output speed sender (B84). – – –1/1

Reference 245-TCU-001, Calibration and Input Addresses

NOTE: The tractor must be restarted after every calibration and every time the calibration procedure is interrupted.

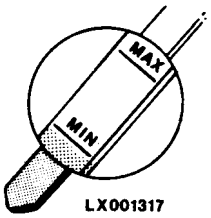
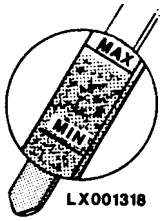
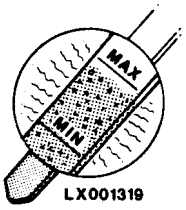
LX24888,00003B1 –19–01AUG02–1/1

Address TCU 20 — Transmission Calibration

NOTE: While the forward and reverse clutches are being calibrated, the tractor may jolt slightly.

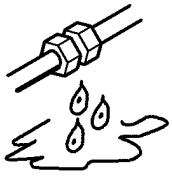
CAUTION: Keep at a safe distance when calibrating!

– – –1/1

❷ **Checking the condition of the hydraulic oil**	 LX001317 –UN–25JUL94  LX001318 –UN–25JUL94  LX001319 –UN–25JUL94	Is the oil level too low? Possible causes: • Improper service intervals • External leaks (loss of oil) Is the oil milky or dirty? Possible causes: • Water in oil (milky) • Filter failure (dirty) • Mechanical failure (metallic particles) Is the oil discoloured or does it smell burnt (overheated oil)? Possible causes: • Internal leaks • Bent oil lines • Clogged oil cooler • Wrong oil viscosity • Mechanical failure	**OK:** GO TO 3. **NOT OK:** Rectify the fault.

– – –1/1

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❸ **Checking the tractor for external leaks with the engine shut off**	*NOTE: If possible, do this check with the tractor at its operating temperature. Before doing the check, switch on the engine and deliberately engage and disengage all tractor components in turn, including the steering, rockshaft, SCVs, brakes, differential lock, front-wheel drive[1], PTO and front PTO[1].*  LX1021428 –UN–22JUN99	Possible causes: • Broken lines, ruptured hoses or loose connections • Cracks or porous areas in the housing • Leaks at shaft sealing rings, O-rings or gaskets	**OK:** GO TO 4. **NOT OK:** Rectify the fault.

[1]If equipped

– – –1/1

Oil comes from system 2 and flows through modulator valve (G) and restrictor (F) to the accumulator piston (D), which fills up with oil. This oil also acts against the sump valve (B). However, the sump valve remains in the position shown, as oil from system 1 exerts pressure on the other end of the sump valve. This end of the piston has a larger diameter, which means that the oil has a greater surface area to act against and the force at this end is higher. Thus oil flows from system 1 through the sump valve to the forward/reverse valve, where it can flow no further.

Oil from system 2 acts on both ends of modulator valve (G), but it remains in the position shown (maximum through-flow) because spring force and the full accumulator piston are both acting on the l.h. end of the modulator valve.

NOTE: Operation is basically the same in reverse drive, only the forward/reverse valve (A) supplies pressure oil to the brake piston (L) and the oil from the clutch piston (K) flows into the sump.

Continued on next page

Operation

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Bleeding procedure

1. With the engine running, turn the steering wheel slowly and evenly two or three times from left full lock to right full lock and back again. This fills the brake valve housing via the steering valve return line. Shut off the engine.

2. As shown in the relevant illustration, slide two transparent bleed tubes over the appropriate bleed screws. Place the other ends of the two bleed tubes in the oil filler neck.

3. Open the bleed screws by half a turn.

4. Start the engine.

5. Brake pedals must be coupled together. Apply gentle pressure to the brake pedals and hold them in this position until the fluid escaping from the bleed screws is free of air bubbles.

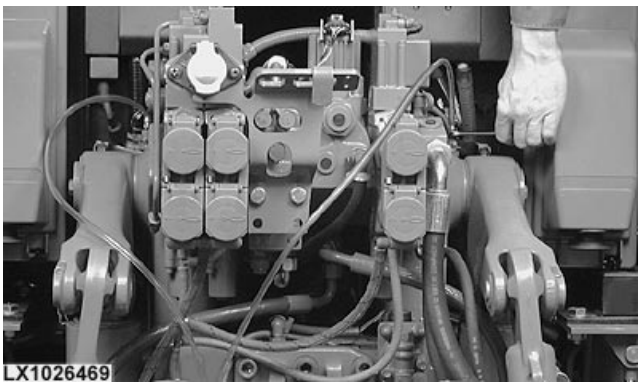
6. Then depress the pedals briefly and release. Repeat this a few times. This should flush out any air bubbles left in the fluid.

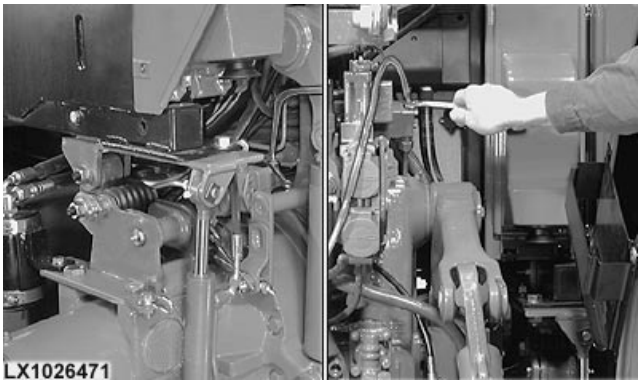
7. If necessary, repeat step 5.

8. Hold the pedals in the depressed position and close the bleed screws.

9. Shut off the engine and actuate the brake pedals several times each (separately!) with the engine shut off. This bleeds the last of the air out of the brake valve. There must be perceptible (increasing) resistance before each pedal reaches its limit of travel.

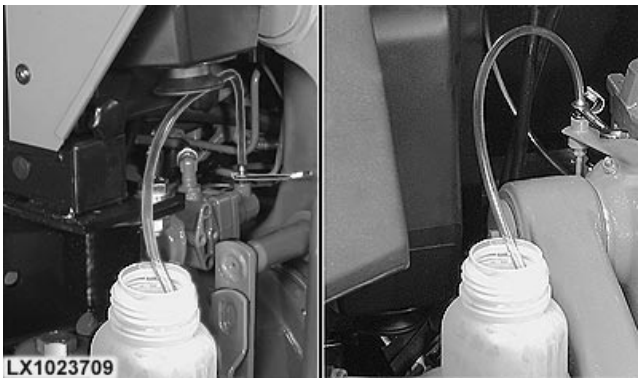
IMPORTANT: If pedal does sink noticeably after resistance has been reached, leaks in the brake system may be the cause.





With hydraulic trailer brake and air brakes





With MFWD and disk brake

LX24888,0000449 –19–28SEP01–2/2

Reference 270-20-020, PFC Hydraulic System—Operation

NOTE: Description refers to the following legend and illustrations.

The charge oil pump (4) pumps oil from the sump (differential housing) (1) via the primary filter (2) through the hydraulic oil filter (5) to the lube oil valve (8) and the oil reservoir (9) of the hydraulic pump. A filter bypass valve (7) is located ahead of the hydraulic oil filter to prevent excess pressure in the event of a blocked oil filter. The restriction switch[1] (32) trips if the filter becomes blocked, and an indicator light goes on on the instrument panel.

The lube oil valve (8) of the charge oil pump ensures that the hydraulic pump (15) receives filtered oil with priority via the oil reservoir (9). Then the rear PTO (14), differential drive shaft (13), final drives (11) and differential (12) are supplied with lube oil. Surplus oil is routed back to the charge oil pump inlet.

The oil reservoir (9) is located ahead of the hydraulic pump to prevent the possibility of cavitation noise.

The pump drive (17) is lubricated with hydraulic pump leak oil.

Oil coming from the charge oil pump via the oil reservoir is supplied by the hydraulic pump into the main valve block (20) to the priority valve, from which the steering unit (33) or the trailer brake valve[1] (40) receive oil with priority.

The oil pressure in the circuit of the steering valve is limited to max. 18500 kPa (185 bar; 2680 psi) by pressure-limiting valve (22) in the main valve block.

Furthermore, oil is supplied to the SCVs (26, 27 and 28), the rockshaft valve (24), via the left special endplate to the valve that controls the hydraulically suspended cab, via the right special endplate to the ICV and from there to the front hitch, front loader and other hydraulic components.

Return oil flows to the sump (1) via the main valve block.

The reservoir (48) of brake valve (35) is filled with oil returning from the steering system. The power brake valve[1] is also directly supplied with oil from the hydraulic pump via a vibration damper (31).

The TLS front wheel drive axle pilot valve (51) also receives oil directly from the hydraulic pump. Return oil flows to the sump via the rockshaft valve[2] or clutch housing[3].

The stand-by pressure (min. system pressure) of approx. 3000 kPa (30 bar; 465 psi) and the maximum operating pressure (max. system pressure) of up to 20000 kPa (200 bar; 2900 psi) as well as the oil delivery rate in the hydraulic system is regulated by means of the pressure-and-flow regulator (18) of the hydraulic pump (15). The demand for high pressure oil (41) or oil flow is communicated by high pressure oil loads such as steering, power brake valve[1], trailer brake valve[1], SCVs, rockshaft valve, Power Beyond valve[1], ICV[1], hydraulically suspended cab[1] and FWD axle with TLS[1], via a pilot (LS) pressure line (44) to the hydraulic pump's pressure-and-flow regulator (18) which matches the pump's pressure and flow to current demand.

The shuttle valves (19) determine and transmit the highest LS pressure to the pressure-and-flow regulator of the hydraulic pump.

[1]If equipped

[2] 6320 and 6420 tractors

[3] 6520 to 6920S tractors

LX24603,000012C –19–11MAR02–1/1

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❷ **Checking and adjusting the nitrogen precharge**	See Reference 280-15-002 , Checking and Adjusting the Nitrogen Precharge. **IMPORTANT: All nitrogen precharge values have a tolerance of ±150 kPa (1.5 bar; 21.8 psi).** **6120 to 6420 tractors—Specification** Accumulator (2 used), nitrogen precharge—Pressure ..... 4000 kPa 40 bar 580 psi Low pressure accumulator, nitrogen precharge—Pressure ..... 4800 kPa 48 bar 696 psi **6520 to 6920 tractors—Specification** Accumulator (2 used), nitrogen precharge—Pressure ..... 4000 kPa 40 bar 580 psi Low pressure accumulator, nitrogen precharge—Pressure ..... 4800 kPa 48 bar 696 psi	**OK:** GO TO 3. **NOT OK:** Adjust the nitrogen precharge. – – –1/1
❸ **Adjusting the sensor rod (position sensor to Panhard link)**	See Reference 280-15-003 , Adjusting the Sensor Rod (Position Sensor to Panhard Link). **Specification** Sensor rod (position sensor to Panhard link)—Length ..... 170 ± 1 mm 6.7 ± 0.04 in.	**OK:** End of test procedure. **NOT OK:** Adjust the sensor rod. – – –1/1

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