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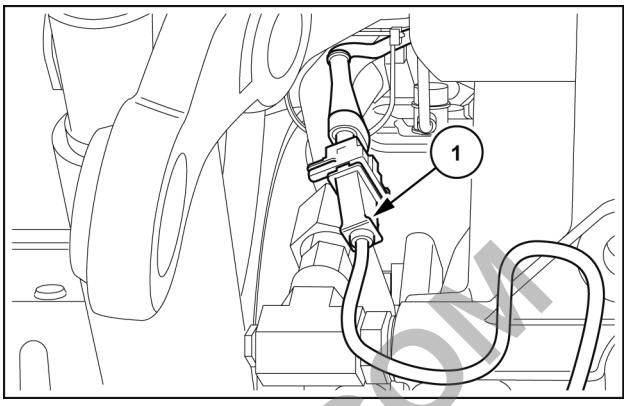
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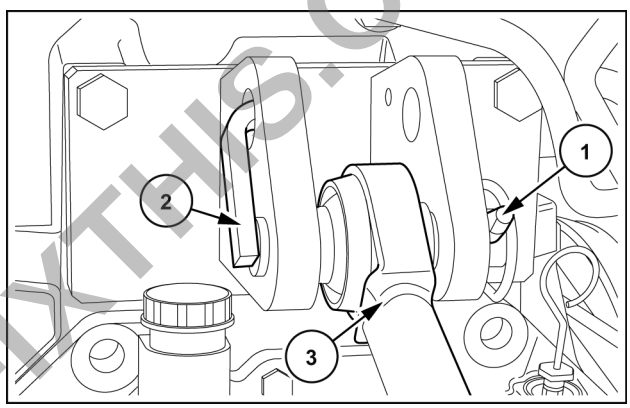
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9. Disconnect the electrical connection **(1)** on the PTO rev counter.



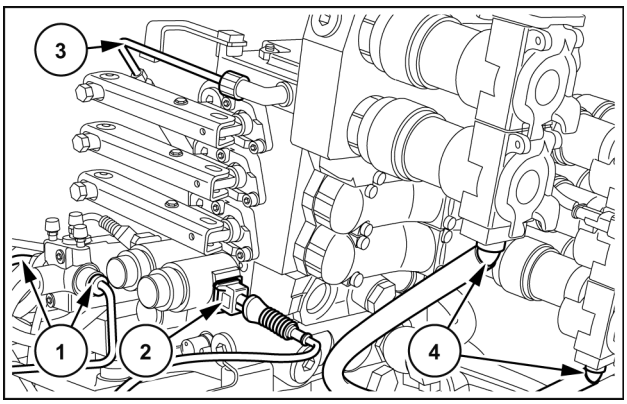
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10. Detach the lock pin **(1)** and the support pin **(2)** , then remove the top link **(3)**.



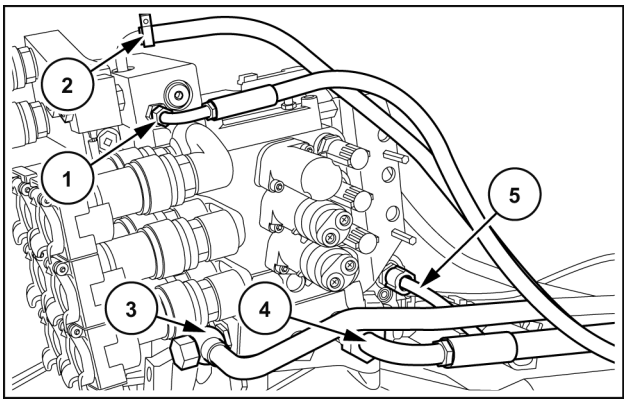
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11. Detach the two pipes **(1)** from the trailer brake valve (where applicable) to the rear brakes, the electric connector **(2)** to the two solenoids of the lift control valve, the **load sensing** piloting valve **(3)** and the oil recovery pipes **(4)** from the quick couplers.



MOIL12APL0059AA 11

12. Detach the spool piloting **(1)** and diverter outlet **(2)** pipes. Detach the feed pipe from the pump to the spool valve assembly **(3)** and the one to the ventral spool valves **(4)** (where applicable). If present, disconnect the connection pipe from the trailer brake valve to the Italian spool valve **(5)** and the electrical connector connected to the pressure sensor on the trailer brake valve.



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Transmission drive and driven shafts - Assemble

T5.95 24x24 HiLo Trans., T5.105 24x24 HiLo Trans., T5.115 24x24 HiLo Trans.

DRIVING SHAFT - Dual command (2 speed power shift)

NOTE: *For the correct orientation of the various parts, refer to* ***Transmission drive and driven shafts - Sectional view Longitudinal section of the main shaft of Dual Command (2 Speed Power Shift) (21.154)****.*

- Fit the circlip **(8)**.

- Mount the bearing **(7)** inserting it from the back of the forward gear shaft, make it flush against the ring.

- Insert the forward gear shaft **(6)**, from the front, into the reverse gear shaft **(5)**, on the back, until the latter reaches the position reaching the bearing.

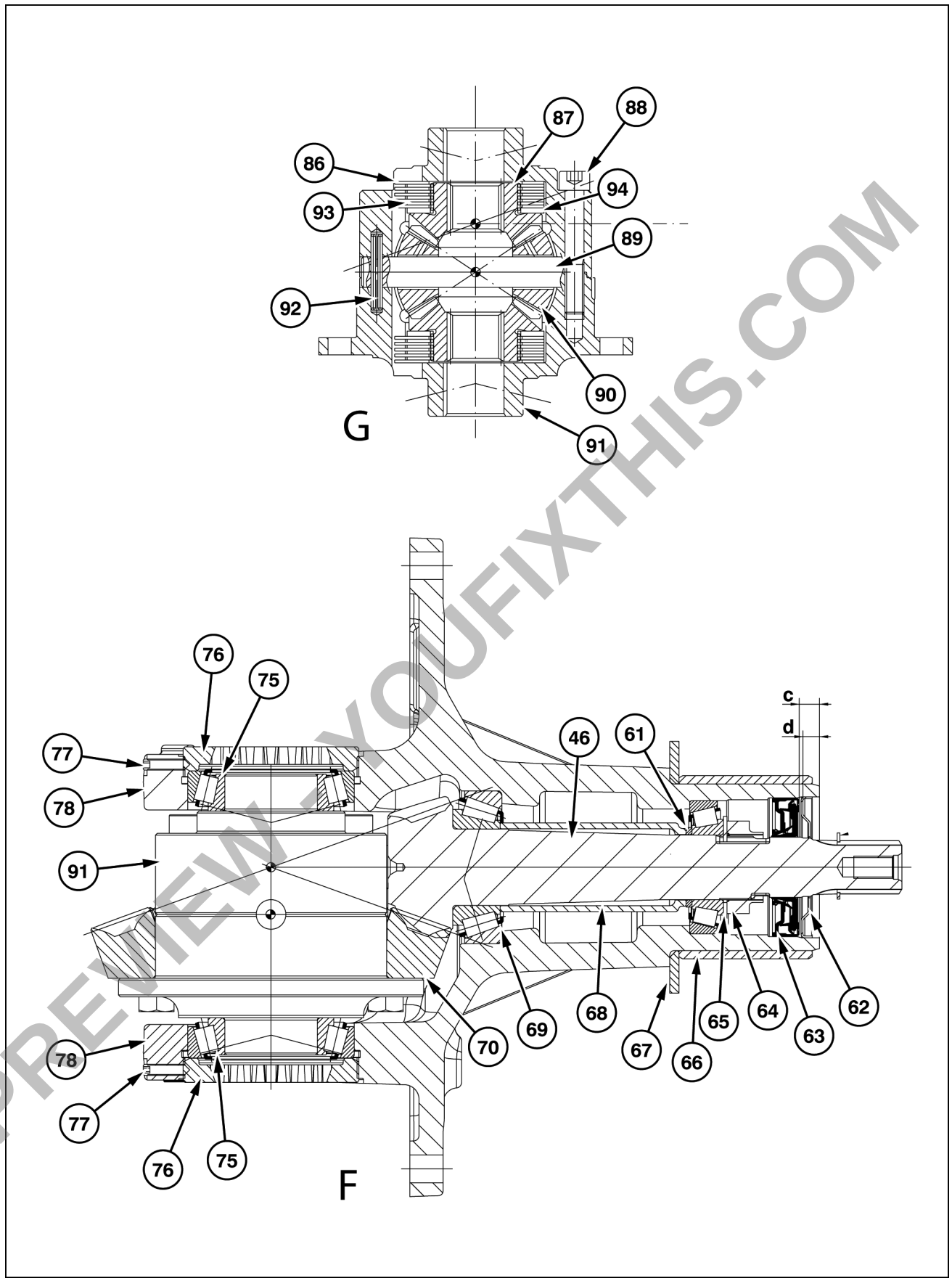
- Insert the bearing retaining circlip **(4)** into the reverse shaft.

- Insert the gear **(3)** from the back of the forward gear shaft, make it flush with the bearing.

- Insert the circlips **(2)** and **(1)**.

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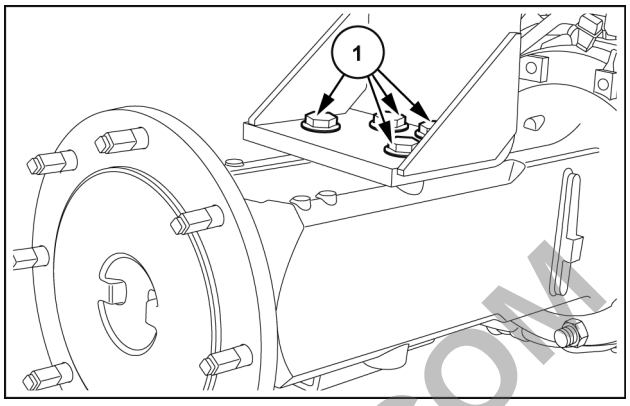
WLAPL4S25C106H 3

bevel drive with self--locking differential (Lim Slip)

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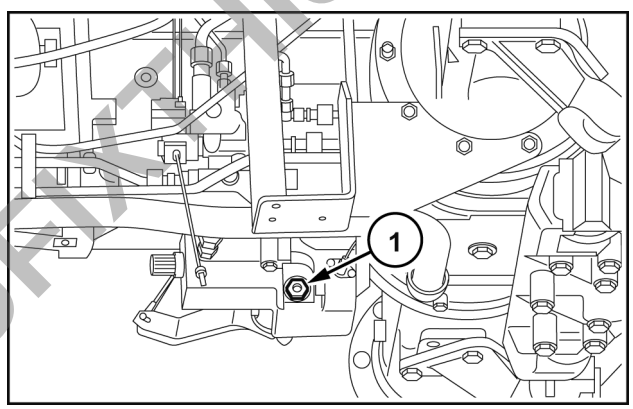
6. Take out the screws **(1)** fastening the cab support bracket to the gearbox.



MOIL12APL0039AA 5

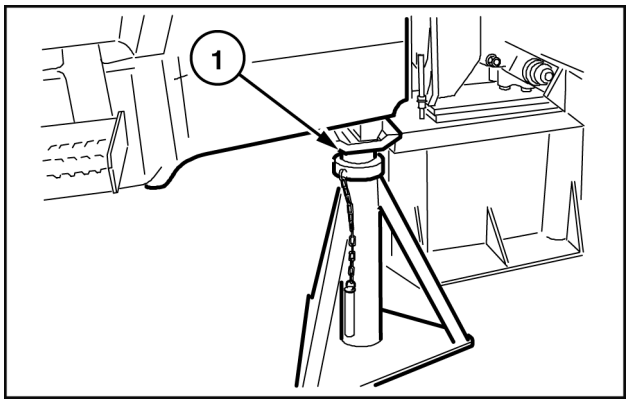
7. Slightly raise the cab and position a suitable piece of wood between the cab and the lift casing, making sure not to crush any piping or wiring during the procedure.

8. Take out the plug **(1)** and drain the oil from the gearbox--rear transmission casing.



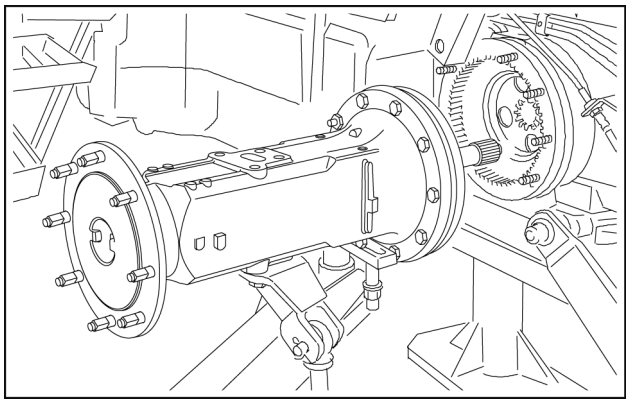
WLAPL4S10C117A 6

9. Position a stand **(1)** under the rear part of the fuel tank.



MOIL12APL0037AA 7

10. Connect the final drive casing to suitable equipment for lifting and retaining. Take out the retaining bolts and remove the final drive casing from the transmission casing.

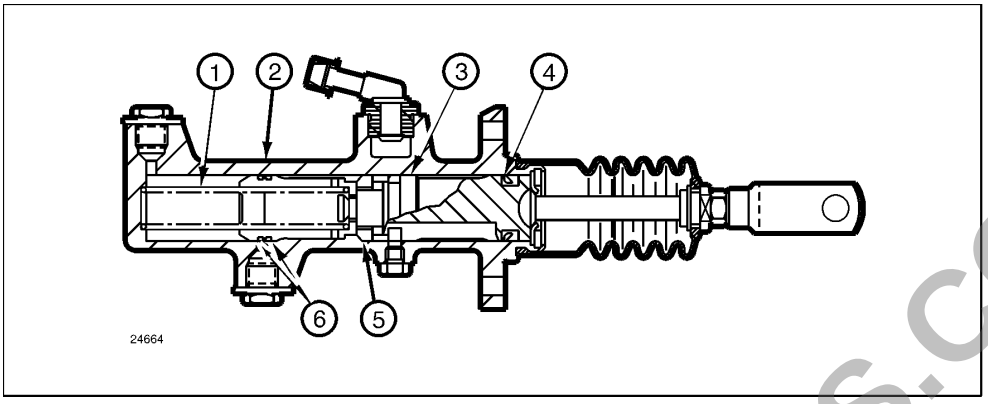


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Brake pump - Sectional view

Service brake sectional drawing



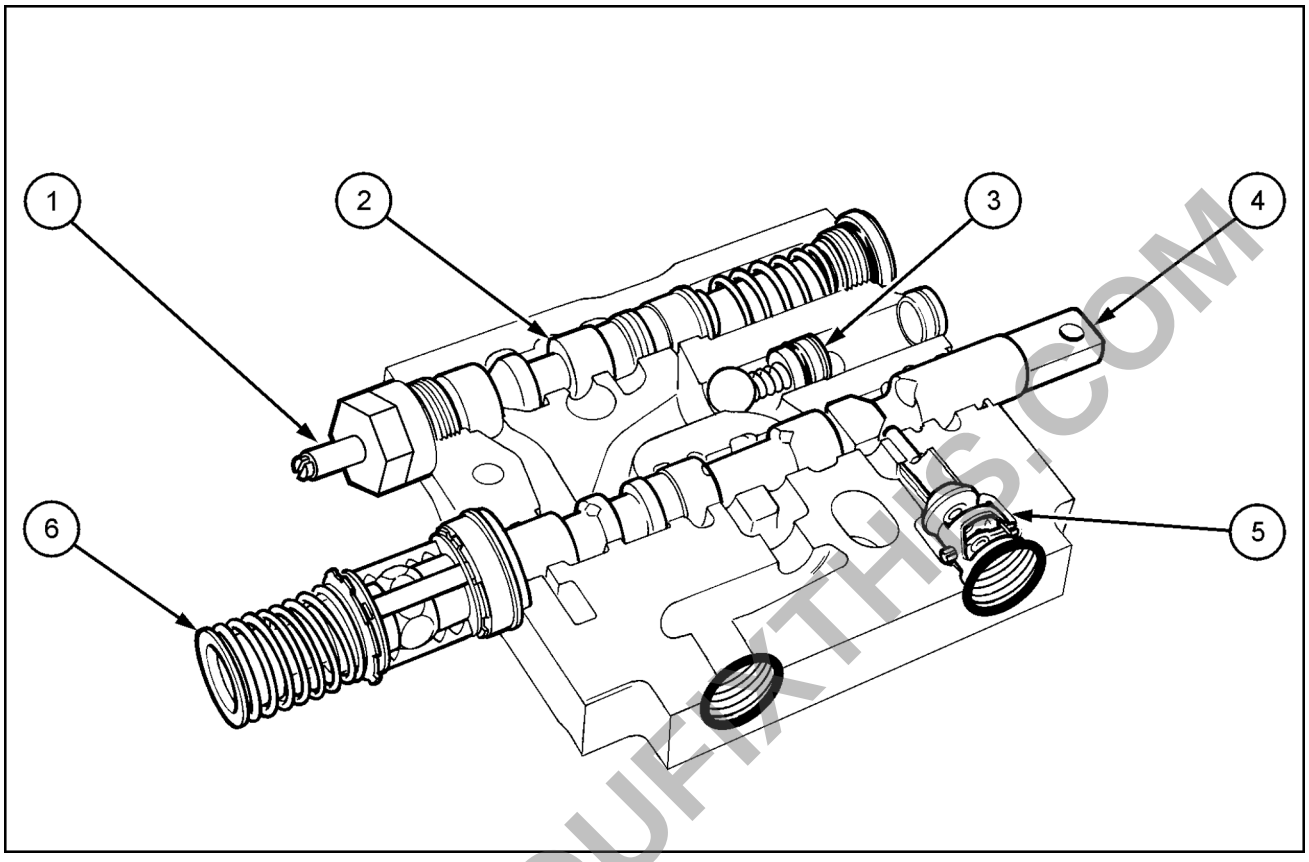
24664 1

(1). Spring.
(2). Pump body.
(3). Control piston.
(4). Rear seal.
(5). Central seal.
(6). Front seals.

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Main hydraulic components within each auxiliary spool valve



SEZ35CAP3F-3 2

(1) . Flow control valve adjustment
(2) . Flow Control Adjuster
(3) . Load check valve
(4) . Spool
(5) . Lock Valve
(6) . Pin centering mechanism

Flow control valve adjustment ((1) , 2)

Flow control valve adjustment is carried out manually and controls the oil flow by means of the auxiliary spool valve. By turning the adjuster, the oil flow throttle clearance is varied by means of the flow control valve.

Flow control valve ((2) , 2)

The flow control valve reads the throttle pressure differential with the relative adjuster, and controls the flow by means of the auxiliary spool valve.
As each flow control valve individually reads the pressure differential of the operating auxiliary spool valve, two or more circuits can be simultaneously controlled by working at different pressures.

Load check valve ((3) , 2)

The check valve impedes pressure backflow from the auxiliary spool valve circuit when the control pin is activated and the pump system pressure is less than the counterpressure in the circuit.
The following example explains operation:
When a cylinder is under a consistent load and the spool valve pin is moved from the neutral position to the lifting position, the pump pressure could be less than the counterpressure in the auxiliary spool valve circuit.
In this event, the counterpressure would force the oil back into the circuit, momentarily reducing the load, before the pressure in the system increases to maintain and further lift the load. The load check valve prevents this from happening.

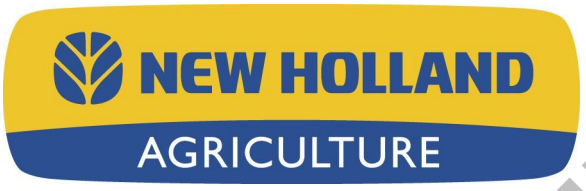
Lockout valve ((5) , 2)

The lockout valve is located in the auxiliary spool valve lifting duct and is closed when the valve is in neutral.

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Compo-nent	Wiring diagram table	Description	Connector	Wiring harness diagram table
X-035B	**Wire harnesses - Electrical schematic frame 06 (55.100)**	Lights jumper wire connector	X-035B	**8**
X-035C	**Wire harnesses - Electrical schematic frame 06 (55.100)**	Lights jumper wire connector	**X-035C**	**8**
X-046	**Wire harnesses - Electrical schematic frame 05 (55.100)**	Left fan splitting	**X-046**	**6** - **7**
X-047	**Wire harnesses - Electrical schematic frame 05 (55.100)**	Right fan splitting	**X-047**	**6**
X-050	**Wire harnesses - Electrical schematic frame 05 (55.100) Wire harnesses - Electrical schematic frame 06 (55.100) Wire harnesses - Electrical schematic frame 07 (55.100) Wire harnesses - Electrical schematic frame 08 (55.100)**	Cab roof main cable splitting	**X-050**	**7** - **8**
X-063	**Wire harnesses - Electrical schematic frame 06 (55.100)**	Roof lights connector	**X-063**	**8**
X-071	**Wire harnesses - Electrical schematic frame 08 (55.100)**	Rotating beacon right-hand socket extension	**X-071**	**8**
X-073	**Wire harnesses - Electrical schematic frame 08 (55.100)**	Rotating beacon left-hand socket extension	**X-073**	**8**
X-087	**Wire harnesses - Electrical schematic frame 10 (55.100)**	3rd spool valve splitter solenoid extension	**X-087**	**5** - **7**
X-095	**Wire harnesses - Electrical schematic frame 10 (55.100)**	License plate light splitting	**X-095**	**6**
X-095A	**Wire harnesses - Electrical schematic frame 10 (55.100)**	Italian license plate light extension splitting	**X-095A**	**6**
X-098	**Wire harnesses - Electrical schematic frame 09 (55.100)**	**ISO/NASO** socket extension splitting	**X-098**	**7**
X-160	20	Cab power splitting	**X-160**	**7** - **8**
X-300	**Wire harnesses - Electrical schematic frame 03 (55.100) Wire harnesses - Electrical schematic frame 04 (55.100) Wire harnesses - Electrical schematic frame 13 (55.100) Wire harnesses - Electrical schematic frame 14 (55.100) Wire harnesses - Electrical schematic frame 15 (55.100) Wire harnesses - Electrical schematic frame 16 (55.100)**	Transmission cab splitting	**X-300**	**5** - **7**
X-370	**Wire harnesses - Electrical schematic frame 02 (55.100)**	Cab transmission power splitting	**X-370**	**3** - **7**
X-380	**Wire harnesses - Electrical schematic frame 22 (55.100)**	Cab - front loader splitting	**X-380**	**7**
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Wire harnesses - Electrical schema TRANSMISSION CONTROL UNIT, ELECTRONIC LIFT, 4 DRIVING WHEELS, DIFFERENTIAL LOCK, POWER TAKE-OFF

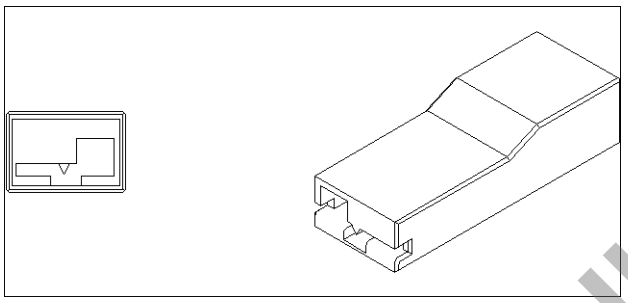
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A-002	**Wire harnesses - Electrical schematic frame 14 (55.100)**	Clutch engagement button module
A-004	**Wire harnesses - Electrical schematic frame 03 (55.100)**	Electronic lift mouse (**EDC**)
A-006	**Wire harnesses - Electrical schematic frame 02 (55.100)** **Wire harnesses - Electrical schematic frame 03 (55.100)** **Wire harnesses - Electrical schematic frame 04 (55.100)** **Wire harnesses - Electrical schematic frame 05 (55.100)** **Wire harnesses - Electrical schematic frame 09 (55.100)** **Wire harnesses - Electrical schematic frame 10 (55.100)** **Wire harnesses - Electrical schematic frame 13 (55.100)** **Wire harnesses - Electrical schematic frame 14 (55.100)** **Wire harnesses - Electrical schematic frame 17 (55.100)** **Wire harnesses - Electrical schematic frame 19 (55.100)** **Wire harnesses - Electrical schematic frame 22 (55.100)** **Wire harnesses - Electrical schematic frame 23 (55.100)**	Fuses and relays panel

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CONNECTOR X-065 - Worklamp SW B1

CONNECTOR X-065 - Worklamp SW B1			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	515 (O/W)	X-065Worklamp SW B1 SP-043	**Wire harnesses - Electrical schematic frame 06 (55.100)** **Wire harnesses - Electrical schematic frame 06 (55.100)**



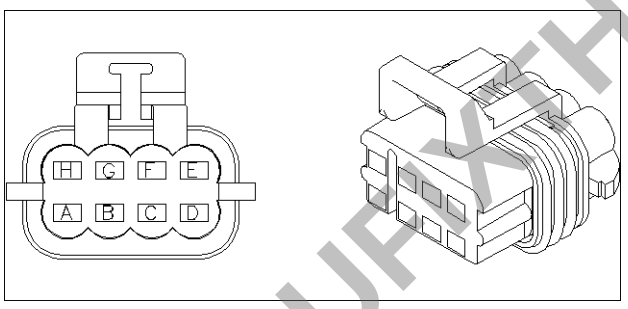
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CONNECTOR X-326 - EDC MOUSE

CONNECTOR X-326 - EDC MOUSE			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
A	114 (U/R)	X-326EDC MOUSE X-210XCM CN1-B	**Wire harnesses - Electrical schematic frame 03 (55.100)**
B	113 (S/B)	X-326EDC MOUSE X-210XCM CN1-B	
C	159 (O)	X-326EDC MOUSE SP-006	
D	120 (B)	SP-009 X-326EDC MOUSE	
E	118 (N/W)	X-326EDC MOUSE X-210XCM CN1-B	
F	11A (B/Y)	SP-068 X-326EDC MOUSE	
G	116 (G/B)	X-326EDC MOUSE X-210XCM CN1-B	
H	115 (TQ)	X-326EDC MOUSE X-230XCM CN3-A	



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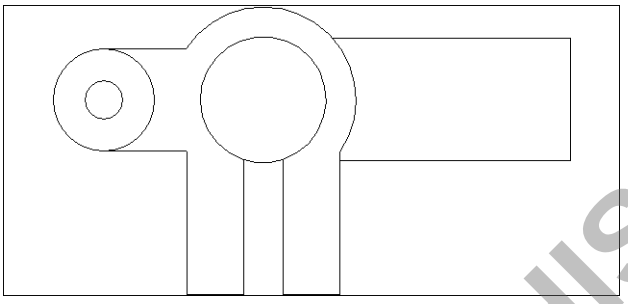
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Wire connectors - Component diagram 89

CONNECTOR X-892 - Battery Negative Stud

CONNECTOR X-892 - Battery Negative Stud			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	1 (B)	X-892Battery Negative Stud X-893Boost Terminal Negative	**Wire harnesses - Electrical schematic frame 01 (55.100)**



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Battery - Charging

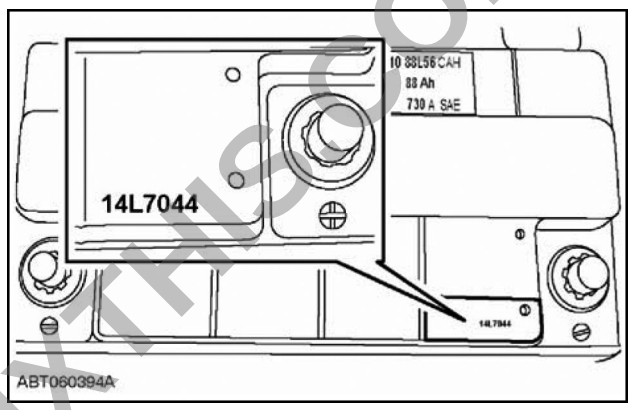
Only one type of battery (**132 A·h**) is used on the range of tractors. This chapter gives the procedure for charging the **132 A·h** and **100 A·h** battery (even if, for the moment, it is not used).

NOTE: *All claims under warranty concerning the batteries must indicate the battery date code.*

Batteries type A

NOTE: *The following batteries are used only in production.*

1. They can be identified by:
   - The part number hot stamped on the top of the battery casing or given on the label (even though necessarily at times these do not correspond to the numbers used as spares).
   - The position of the production date code. The date code is on the bottom right-hand side of the positive terminal.
   Example of date code:
   14L 7 044
   14 L = Production plant
   7 = Year (2007)
   044 = Progressive number



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Batteries type B

NOTE: *The following batteries are used in production and in the spare parts service for changing batteries.*

They can be identified by:
- The part number hot stamped on the top of the battery casing or given on the label (even though necessarily at times these do not correspond to the numbers used as spares).
- The position of the production date code. The date code is on the bottom right-hand side of the positive terminal.

Example of date code:
7C
CW06
7 = Year (2007)
C = Month (February) A = December, B = January, C = February, D =March, E = April, F =May,G= June,H= July, J = August, K = September, L = October, M = November.
CW06= Production plant

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Rear three-point hitch control potentiometers - Component localisation from powerlift control, radar, control unit and traction sensors 3

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1066-EDC Hydraulic Valve Raise Solenoid Short Circuit

Cause:
EDC HYDRAULIC VALVE RAISE SOLENOID SHORT CIRCUIT

Possible failure modes:

1. Faulty connector
2. Faulty **EDC** valve raise solenoid
3. Wiring harness faulty
4. Faulty controller

Solution:

1. Check the **EDC** valve raising solenoid connector **X-334**, the transmission -- cab main connector **X-300** and the connectors **X-200** and **X-220** of the controller.

   A. Ensure the connectors are connected and not damaged, that the pins are in the correct position and the fit is tight. Repair or replace as necessary.

   B. If the connectors are okay, continue to step **2**
2. Check the **EDC** valve raise solenoid.

   A. Disconnect the connector **X-334** of the **EDC** valve lifting solenoid valve. Measure the resistance between the terminals of the solenoid valve. If the resistance indicated is not approximately **2 Ω**, remove and replace the **EDC** valve lower solenoid.

   B. If the solenoid valve is okay, continue to step **3**
3. Check for a short circuit with positive voltage.

   A. Turn the ignition key switch ON. Measure the voltage between the connector:
   X-334 pin 2 wire 1.0 (G/W) and ground.
   If a voltage is indicated, repair or replace the harness as required.

   B. If a voltage is not indicated, continue to step **4**
4. Check for a short circuit with positive voltage.

   A. Turn the ignition key switch OFF. Disconnect the connector **X-200** of the controller. Turn the ignition key switch ON. Measure the voltage between the connector:
   X-334 pin 1 wire 1.0 (B/W) and ground.
   If a voltage is indicated, repair or replace the harness as required.

   B. If the harness is okay, download the correct level of software. If the fault re--occurs, remove and replace the controller.

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B. If continuity/short test are unsuccessful, find and repair the damaged section(s) of the wiring harness.

4. Verify proper coolant temperature sensor operation. Disconnect the coolant temperature sensor connector **X-969** and test resistance of coolant temperature sensor using the table of resistance vs temperature below. Approximate the temperature when performing test. Coolant temperature sensor failures are typically at the extreme ends of the table or off the table entirely.

Coolant Temperature	Resistance Value
-20 °C (**-4 °F**)	**10.5 kOhm**
0 °C (**32 °F**)	**7500 ohms**
20 °C (**68 °F**)	**4200 ohms**
40 °C (**104 °F**)	**980 ohms**
60 °C (**140 °F**)	**780 ohms**
80 °C (**176 °F**)	**500 ohms**
100 °C (**212 °F**)	**280 ohms**
120 °C (**248 °F**)	**97 ohms**

A. If the resistance measurement does not approximately match the table, replace the sensor.

B. If the resistance measurement does approximately match the table, continue with step **5**.

5. Verify ECU ground and voltage supply. Use the product schematic for a reference, with the key switch OFF disconnect ECU vehicle connector **X-937** from the ECU. Check for **12 volts** with the key switch in the ON position, and continuity at the appropriate pins defined in the test table below.

Test Type	From	To	Expected Results
1. Voltage	ECU vehicle connector **X-937** (Pin 1, 3, 5)	Ground (engine block)	Approximately. **12 volts**
2. Continuity	ECU vehicle connector **X-937** (Pin 2, 4, 6)	Ground (engine block)	Approx. **0 - 0.10 ohms**

A. If the voltages and ground paths are correct and the ECU was re-initialized on a prior diagnostic of this type, replace the ECU.

B. If the voltages and ground paths are not correct locate and repair the damaged section(s) of the wiring harness.

6. Visually inspect the relevant harnesses and connectors **X-969** and **X-939** for damage, bent or dislocated pins, corroded terminals or broken wires. Verify that the connectors are fully installed. Flex the harnesses involved to reveal intermittent breaks or shorts in the wiring concerned. Operate the machine while monitoring the Display.

A. If damage is found or other than normal display readings are indicated, repair the damage discovered during the inspection or locate and repair the other than normal display condition and verify that the error has been resolved.

B. If no damage or other than normal display readings are indicated, erase the fault code and continue operation.

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Wire harnesses - Electrical schematic frame 17 (55.100.DP-C.20.E.17)

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Wire harnesses - Electrical schematic frame 18 (55.100.DP-C.20.E.18)

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Wire harnesses - Electrical schematic frame 18 (55.100.DP-C.20.E.18)

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3790-Diesel particulate filter (DPF): Signal range check flow resistance of the particulate filter - maximum

Control Module : ECU

Context:
The flow resistance, dependent on soot mass stored in the particulate filter, should not exceed a defined limit. If this limit is exceeded, the diesel particulate filter is clogged, or a problem in the filter mounting should be assumed.

Cause:
The engine control unit (ECU) has detected the filtered flow is above maximum limit.

Possible failure modes:

1. Diesel Particulate Filter (DPF) is clogged or not installed correctly.
2. Faulty wiring
3. Exhaust restriction
4. Faulty differential pressure sensor

Solution:

1. Verify that the fault code is still active..
   Prior to clearing fault codes write down all fault codes, number of occurrences, and engine hours at last occurrence.

   (1) Use the Electronic Service Tool to clear all fault codes.

   (2) To check for Active fault codes: Start and operate machine.

   A. Fault is not recorded again. OK to return the machine to service.

   B. Fault code 3790 is recorded again. Go to Step **2**.
2. Turn the ignition key switch ON. Run the diesel particulate filter regeneration cycle. Turn the ignition key switch OFF for **1.0 min**. Test drive the machine. Check if the fault code is still active or inactive.

   A. If the fault code is no longer active. OK to return machine to service.

   B. If the fault code is still active, continue with step **3**.
3. Check the condition of the diesel particulate filter. Turn the ignition key switch OFF. Verify that the filter is installed correctly.

   A. If the filter is not installed correctly. Repair as required.

   B. If the filter is installed correctly, continue with step **4**.
4. Check the differential pressure sensor is installed correctly. Turn the ignition key switch OFF. Visually inspect the differential pressure sensor at connector **X-947** for physical damage, proper electrical connection and proper mechanical connection. Ensure all tubes and/or hoses connected to the sensor are in good working condition and properly connected at all ends. Visually inspect the entire exhaust system for bent, crushed or otherwise damaged tubes which may cause an exhaust system restriction.

   A. Damage is found, repair or replace as necessary.

   B. No damage is found, continue with step **5**.
5. Verify that the wiring and connectors are free of damage.

   (1) Inspect the **ECU** connector **X-937** and the differential pressure sensor connector **X-937**. All connections should be secure, tight, free of corrosion, abrasion and damage.

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2021-drive line harness disconnected

Control Module : XCM (multi-function CM)

Context:
Transmission disabled.

Possible failure modes:

1. Faulty connector
2. Wiring fault

Solution:

1. Check the transmission harness connector **X-300**.
   A. Ensure that the connectors are connected, not damaged, the pins are in the correct position and that the fit is tight. Repair or replace as necessary.

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