SERVICE MANUAL

T4030V / T4040V

Tractor

Part number 47888352
English
July 2016

NEW HOLLAND AGRICULTURE

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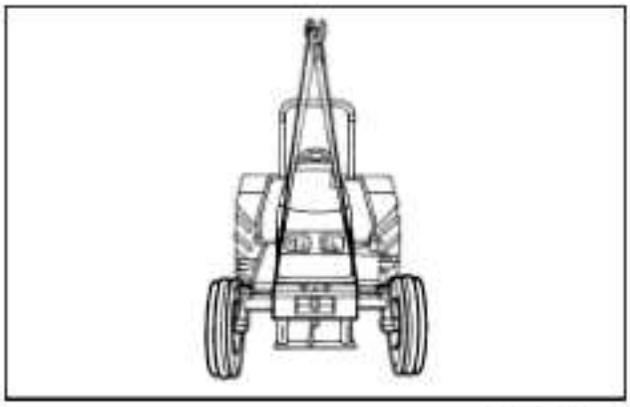
Non-powered front axle - Remove

T4030V With cab - Model Year 2012 [ZCJE01906 - ZDJE09775]	LA 2WD
T4030V With cab [Z8JE04295 - ZCJE10898]	LA 2WD
T4030V Without cab - Model Year 2012 [ZCJE04397 - ZDJE11084]	LA 2WD
T4030V Without cab [Z8JE13092 - ZCJE07076]	LA 2WD
T4040V With cab - Model Year 2012 [ZCJE05523 - ZDJE09978]	LA 2WD
T4040V With cab [Z8JE04453 - ZCJE08151]	LA 2WD
T4040V Without cab - Model Year 2012 [ZCJE12068 - ZDJE09487]	LA 2WD
T4040V Without cab [Z8JE04825 - ZCJE06813]	LA 2WD

⚠ DANGER

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply will result in death or serious injury.

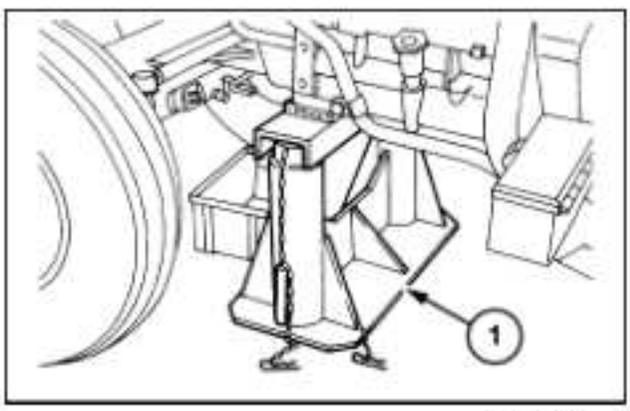
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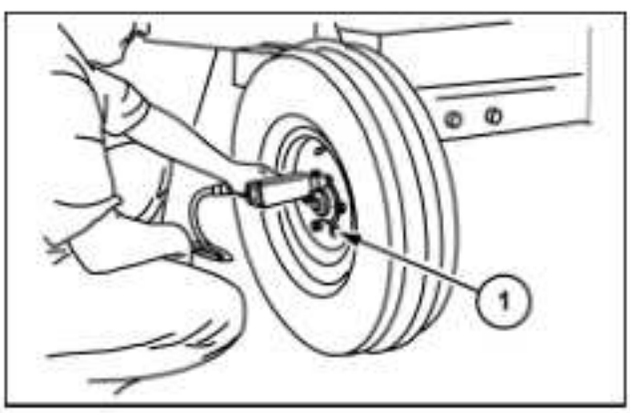
To totally remove the front axle from the tractor, proceed as follows:

1. Lock the rear wheels using suitable chocks.
2. Lift the front of the tractor.
3. Place a mechanical stand **(1)** under the engine sump and insert a wooden block between the engine sump and the stand.



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4. Remove the front wheel retaining bolts **(1)**.



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Wiring harnesses - Electrical schematic sheet 12 - Trailer brake circuit

T4030V Without cab [Z8JE13092 - ZCJE07076]	LA Four-Wheel Drive (4WD) - Automatic engagement
T4040V Without cab [Z8JE04825 - ZCJE06813]	LA Four-Wheel Drive (4WD) - Automatic engagement

Refer to **Wiring harnesses - Component localization (55.100)** for component localisation

Component		Description
C−3		Trailer brake circuit intermediate connection (4 PIN)
GND−7		Dashboard ground
C−8		Trailer brake circuit main connection (4 PIN)
SEN-107		Trailer brake indicator light pressure switch
SEN-108		Trailer brake circuit safety pressure switch
SOL-109		Trailer brake solenoid valves
RLY−110−A **RLY−110−B** **RLY−110−C**		Trailer brake circuit relay
	RLY−9	Trailer brake circuit
	RLY−10	Trailer brake circuit
	RLY−13	Trailer brake circuit
GND−181		Trailer brake circuit ground

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1081-Voltage too high on the lowering limit potentiometer

Control Module : Rear electronic lift control unit

Context:
The lower limit set when the fault code appears is considered the maximum lower limit.

Possible failure modes:

1. Faulty connector
2. Faulty lower limit control potentiometer
3. Wiring harness faulty
4. Faulty controller

Solution:

1. When the cause of the fault code has been rectified, clear the fault code and test the system for normal operation. Check the lower limit control potentiometer in H9, ch 36 .

   A. Turn the lower limit control knob fully clockwise and then fully counter clockwise. If the values displayed are not between 900 and 100, continue to step **2**.

   B. If the values displayed are okay, while still in H9, ch. 36 wiggle the harness and the connector **MOD−43** of the EDC control panel, the connector **MOD−27−A** of the wiring harness of the controller to check for an intermittent circuit. The values of ch 36 will change if an intermittent circuit is indicated, Repair or replace as necessary.
2. Check the connector **MOD−43** of the EDC control panel and the connector **MOD−27−A** 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 **3**.
3. Check the lower limit control potentiometer.

   A. Remove the EDC control panel and disconnect the connector **MOD−43**. While turning the lower limit control knob fully clockwise and then fully counter clockwise, measure the resistance on the potentiometer panel between:
   MOD−43 pin 5 and **MOD−43** pin 1
   MOD−43 pin 5 and **MOD−43** pin 6
   If the resistances indicated are not between approximately a minimum of **170 - 190 Ω** and a maximum **400 - 420 Ω**, replace the control panel.

   B. If the EDC control panel is okay, continue to step **4**.
4. Check for a short to **+12 V**.

   A. Turn the key start ON. Measure the voltage, with the panel disconnected, between the connector **MOD−43** pin 1 wire (AB) and ground.
   If the voltage indicated is greater than **+8 V**, repair or replace the harness as required.

   B. If the voltage indicated is approximately **+8 V**, continue to step **5**.
5. Check for a short circuit with positive voltage.

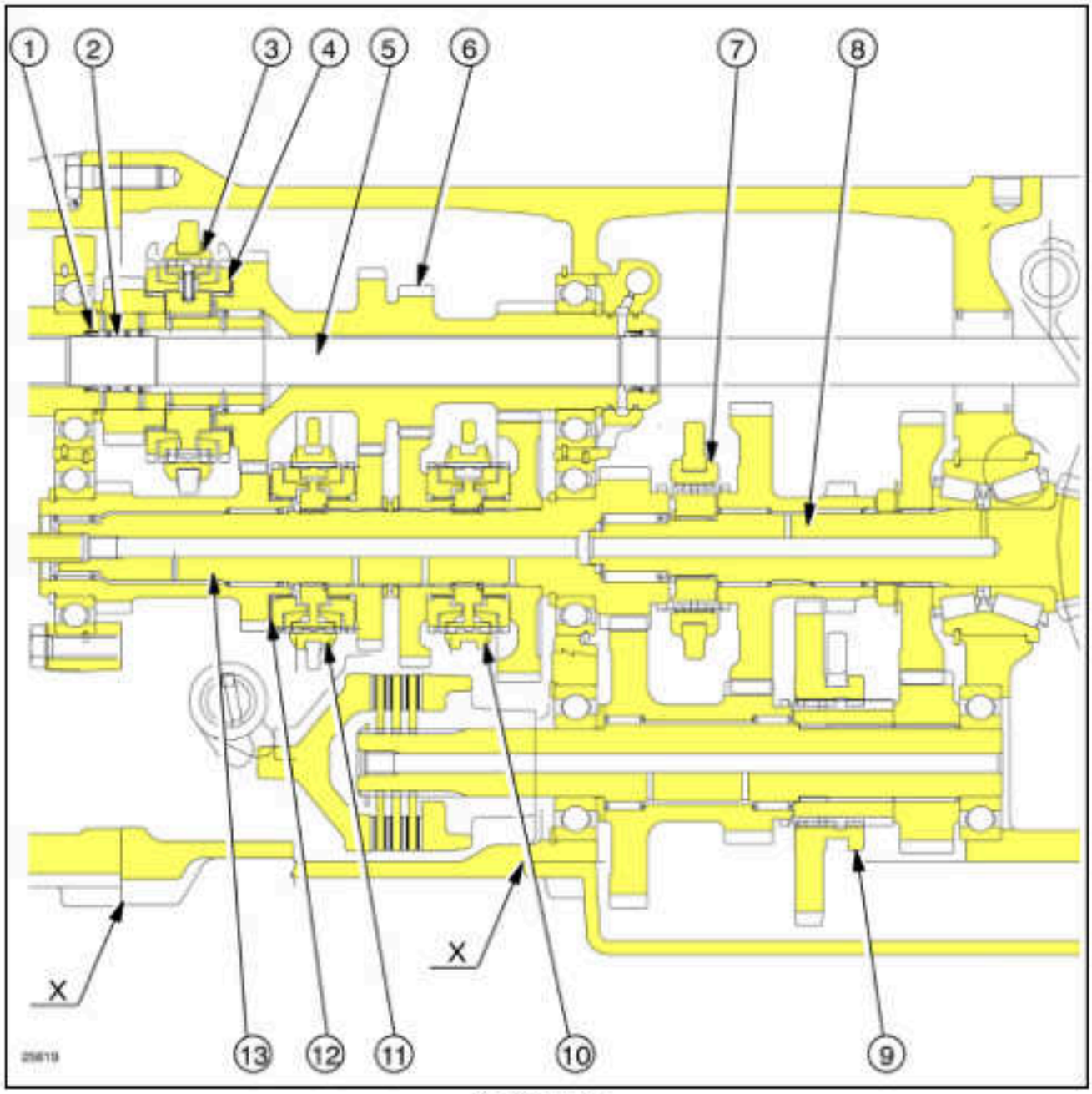
   A. Disconnect connector **MOD−27−A**, turn the key start ON. Measure the voltage between the connector. **MOD−43** pin 5 wire (AN) and ground.
   If a voltage is indicated, repair or replace the harness as required.

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

Wiring harnesses - Electrical schematic sheet 04 - Rear electronic lift circuit (55.100.DP-C.20.E.04)

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Gears, shaft, and bearings - Sectional view Gearbox and gear range



WLSPVN621C1-08G 1

Longitudinal cross-sectional view of gearbox and gear range

1. Seal.
2. Power take-off shaft support roller bearings.
3. Reverser control synchroniser.
4. Gearbox driving gear clearance adjusting thickness.
5. Power take-off shaft.
6. Gearbox driving gear.
7. Selector sleeve for high or medium-low speeds.
8. Bevel pinion shaft.
9. Selector sleeve for low or medium-high speeds.
10. Synchroniser for 1st and 2nd speed.
11. Synchroniser for 3rd and 4th speed.
12. Gearbox driven shaft gear clearance adjusting thickness.
13. Gearbox driven shaft.

NOTE: *On assembly apply a bead of sealing compound to the surfaces "X" as indicated in* ***Transmission housing - Reseal (21.114)****.*

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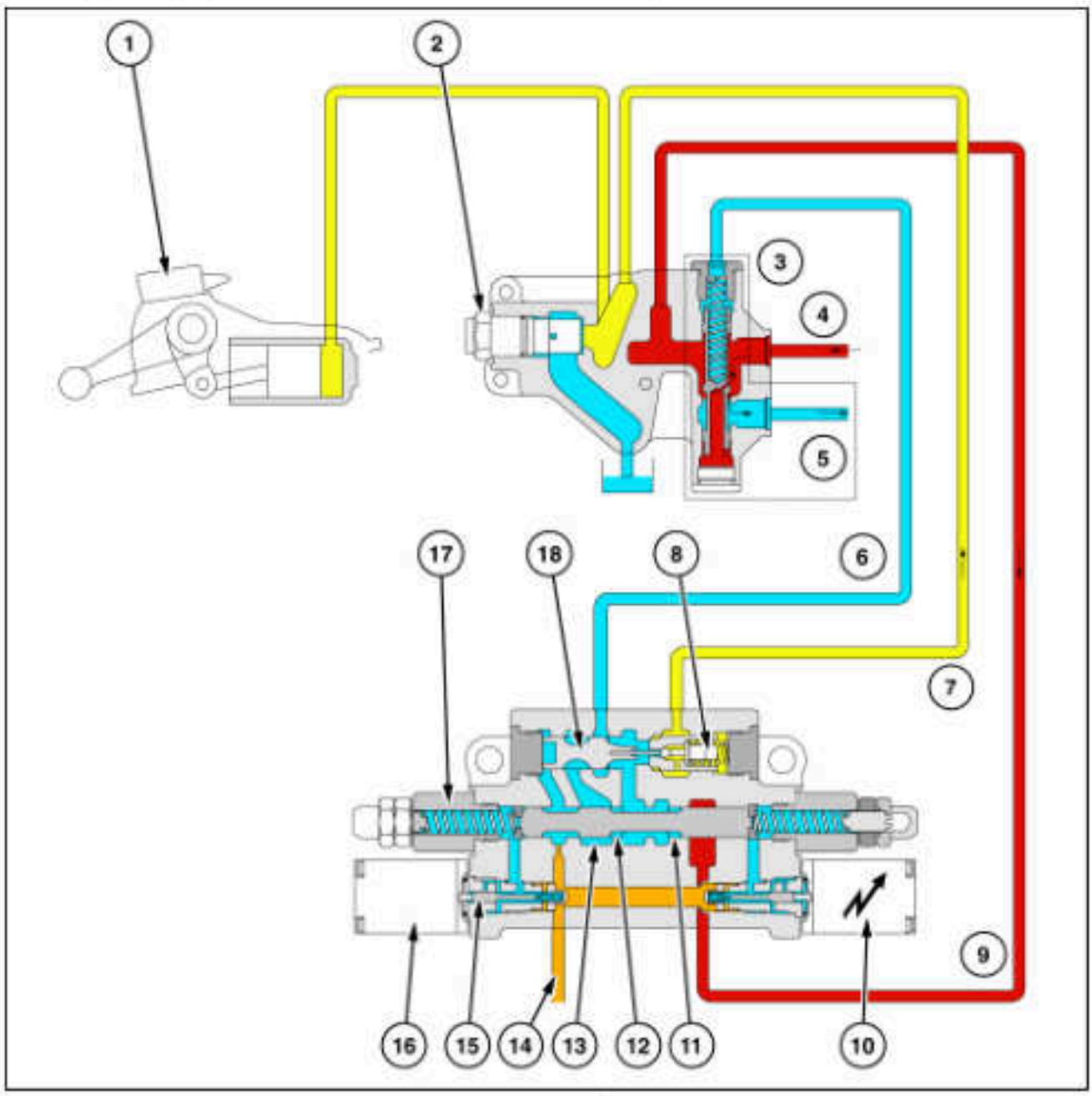
Main lift system - Dynamic description

Neutral phase

When in neutral, the electronically controlled hydraulic lift microprocessor does not send lifting or lowering signals to the control solenoid valves, and the elastic force applied, by each spring **(17)** to each end of the control valve block pin, maintains the pin in the central neutral position, preventing the oil from the pump from arriving at the hydraulic lift.

When the control valve block pin is in the neutral position, the right-hand end of the lift valve **(16)** and the pipe (**(14)**, low pressure circuit) are in communication with the rear transmission casing discharge. Under these conditions, the hydraulic lift non-return valve **(8)** remains closed and the oil in the hydraulic lift cylinder **(1)** is stopped, thereby maintaining the lift arms in a stationary position.

When the hydraulic lift is in the neutral position, the oil delivery flow from the pump flows through the hole on the load maintaining valve **(3)**, overcoming the spring resistance and moving the valve so as to allow communication between the pump delivery oil compartment **(4)** and the discharge **(5)** in the rear transmission casing. Under these conditions, the entire hydraulic pump flow returns to the rear transmission casing.



Electronic draft control functional diagram. Neutral phase.

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Wiring harnesses - Electrical schematic sheet 30 - Input/output wiring diagram for the electronic control unit of Power-Shuttle / dual command (2 speed power shift) 32+16 / 44+16 (SB) - up to February 2012

T4030V With cab [Z8JE04295 - ZCJE10898]	LA Four-Wheel Drive (4WD) - Automatic engagement --- LA Rear lifter - Electronic control
T4040V With cab [Z8JE04453 - ZCJE08151]	LA Four-Wheel Drive (4WD) - Automatic engagement --- LA Rear lifter - Electronic control

Position		Description
(1)		Ignition switch (**SW−19**).
(2)		Starter relay (RLY−13).
(3)		Starter motor (**M−85**).
(4)		Battery (**BAT−83−A**, **BAT−83−B** and **BAT−83−E**).
(5)		Clutch pedal switch (**SW−151**), view in starting position (pedal pressed and shuttle level on neutral), with pedal released and shuttle lever engaged (not on neutral) it supplies current to the control unit (12VD) that will supply the forward and reverse clutches.
(6)		Supply line to the sensors and potentiometers of **5 V** that the control unit provides directly.
(7)		Clutch pedal potentiometer (**SEN−153**).
(8)		Shuttle lever (**SW−152**), composed of three switches:
	(A)	common switch − neutral position (starting), forward/reverse position 12VD supply to the two clutches A and B
	(B)	switch with forward gear diagnostics
	(C)	switch with reverse gear diagnostics.

Position		Description
(9)		Creeper unit position switch (**SW−143**).
(10)		Gear lever position switch (**SW−142**).
(11)		Range lever position switch (**SW−141**).
(12)		control unit moves the synchro (dual command (2-speed power shift) / Power-Shuttle) to the opposite side from where it is at starting. From the movement of the synchronizer, controlled by the potentiometer. This sends a signal to the control unit that understands the power steering pump that supplies the clutch pack oil works properly.
(13)		Transmission temperature sensor (**SEN−148**).
(14)		CAN BUS line wires input, inside the control unit there is the terminator (resistance **120 Ω**).
(15)		Ground that the control unit supplies to the various sensors (observe the triangular end, on all the sensors where at a pin and marked with this symbol they receive ground straight from the control unit).
(16)		Gear lever (**SW−183**) with buttons:
	(A)	HI used to select fast speed
	(B)	LO used to select slow speed
	(C)	DUMP used to change gears, within the same range, without pressing the clutch pedal.
(17)		Discharge solenoid (**SOL−140**).
(18)		Synchronizer movement solenoid in shuttle mode (**SOL−139**).
(19)		Synchronizer movement solenoid in dual command (2 speed power shift) mode (**SOL−138**).
(20)		Reverse gear clutch B solenoid (**SOL−147**).
(21)		Forward gear clutch A solenoid (**SOL−146**).
(22)		Control unit supply:
		12 VD - from the clutch pedal,
		12 VF and 12 VP - directly from the fuses.
(23)		Control unit ground type.
	(A)	The numbers in brackets are the correspondence with the sensors, switches of the diagram.
	(B)	On the control unit the connectors are identified with CN 1b and correspond with the connector **MOD-150**.

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