NEW HOLLAND
TK75VA
TK80A
TK80M
Crawler Tractor

SERVICE MANUAL



87582124

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The following pages are the collation of the contents pages from each section and chapter of the TKA Series Repair manual. Complete Repair part # 87582124.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TKA Series Tractors.

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SECTION 00 - GENERAL

BOOK 1 - 87582125

Chapter 1 - General

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SECTION 10 - ENGINE

BOOK 1 - 87582125

Chapter 1 - Engine

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TROUBLESHOOTING

Problems	Possible Causes	Remedies
The clutch slips	1. Worn disks on pressure plates and flywheel.	Check and compare the data given on the pages indicated, replace any parts which are worn up to or over the limit and adjust levers and clutch control linkage.
	2. Belleville spring disk stretched or damaged.	Replace the Belleville spring disk.
	3. Oil or grease contaminating the disks friction material.	Replace the disks, identify and eliminate the source of the lubricant inside the clutch housing and thoroughly clean the friction surfaces.
The clutch jerks	1. Partial seizure of the external control linkage.	Check rod pivots and lubricate.
	2. Clutch disks deformed.	Replace the disk and adjust the clutch control lever.
	3. Clutch disk with spring drive damaged or with hub rivets loose.	Replace the disk.
	4. Oil or grease contaminating the disks friction material.	Replace the disks, identify and eliminate the source of the lubricant inside the clutch housing and thoroughly clean the friction surfaces.
Clutch sticks and drags	1. Clutch disks deformed.	Replace and adjust disks.
	2. Seizure of external control linkage.	Check, replace faulty parts and lubricate.
	3. Controls incorrectly adjusted.	Adjust the controls.
Clutch noisy when engaged and/or disengaged	1. Thrust bearing worn.	Replace the bearing.
	2. Clutch disks with spring drive faulty.	Replace the disk.
Clutch pedal too stiff	1. Partial seizure of the external control linkage.	Check rod pivots and lubricate.
	2. Partial seizure of pedal pivot.	Check pivot and lubricate.

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SPECIFICATIONS

SPECIFICATIONS	TYPE OF BATTERY
Voltage (V)	12
Cold Cranking Amperage (CCA)	680
Capacity (Ah)	100
Number of elements	6
Weight kg (lbs)	~ 20 (44.1 lbs)
Grounding terminal	Negative

DESCRIPTION AND OPERATION

A "sealed", maintenance-free battery is installed in all models, located behind the driving seat.

NOTE: *"Maintenance-free" means that the battery does not leak electrolyte in normal conditions of use. Leaks may occur if the battery is charged over 14.4 V. This causes the liquid to boil as a result of the gas formed whilst the battery is fully charging. This event may be caused by a charging system fault, quick recharging or topping off.*

The four main functions of the battery are:

- To supply a source of electric energy for starting, switching on and running the instruments.
- Controlling the electrical system voltage.
- To supply electricity when the power required is higher than that produced by the alternator.
- To support inactive loads from the radio.

Each element of the battery consists of positive and negative plates, positioned alternatively one next to the other. Each positive plate is separated from the negative plate by means of a porous insulating separator. If one of the positive plates comes into contact with the negative plates in the element, the element will short circuit and be irreparably damaged. All of the positive plates are welded to a bar and form a positive terminal, whereas all of the negative plates are welded to a similar bar and form a negative terminal.

Each positive plate comprises a lead grid with lead peroxide pasted to the grid holes. The negative plates consist of a lead grid with lead sponge pasted to the grid holes.

The plates are covered by electrolyte formed by a diluted sulphuric acid solution.

The battery casing is made in polypropylene.

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TAIL/SIDE LIGHTS INDICATOR LAMP (See: ELECTRICAL CIRCUITS – Diagram C)

With the lights switch turned to "TAIL/SIDE LIGHTS", the indicator lamp on the control panel does not switch on.

Reconnect the wiring.

After having checked the "TAIL/SIDE LIGHTS" procedure on page 56, measure the 12 V voltage on connection (51), between pin (2) and pin (6), when the lights switch is ON.
Is voltage present?

NO

Check the wiring (yellow wires).
Is wiring correct?

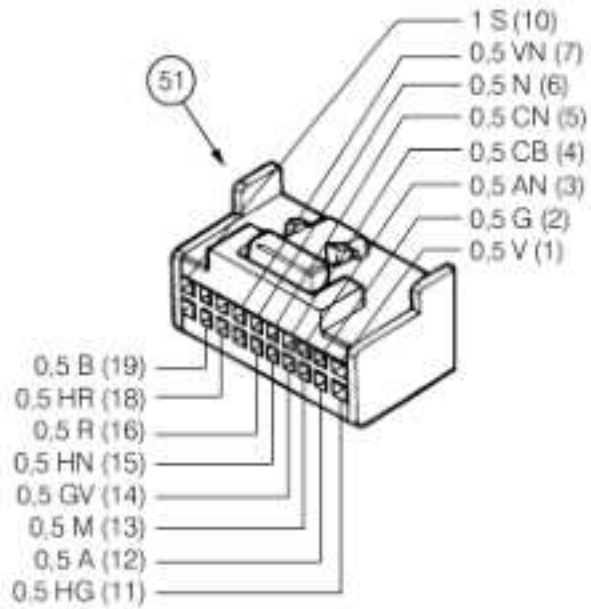
NO

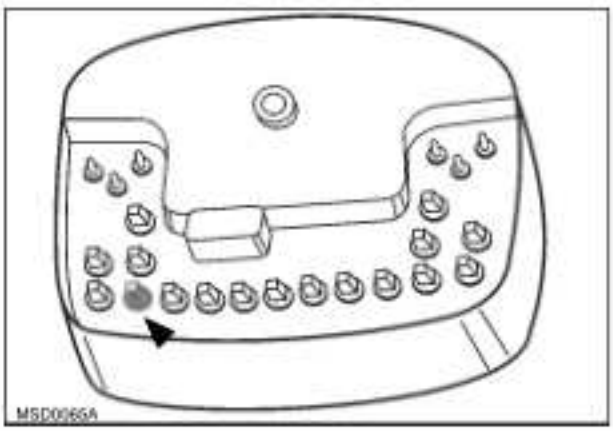
YES

The tail/side lights indicator lamp circuit functions correctly.

YES

Extract the indicator lamp (2) (indicated by the arrow in the figure) on the instrument panel, test and replace if necessary.





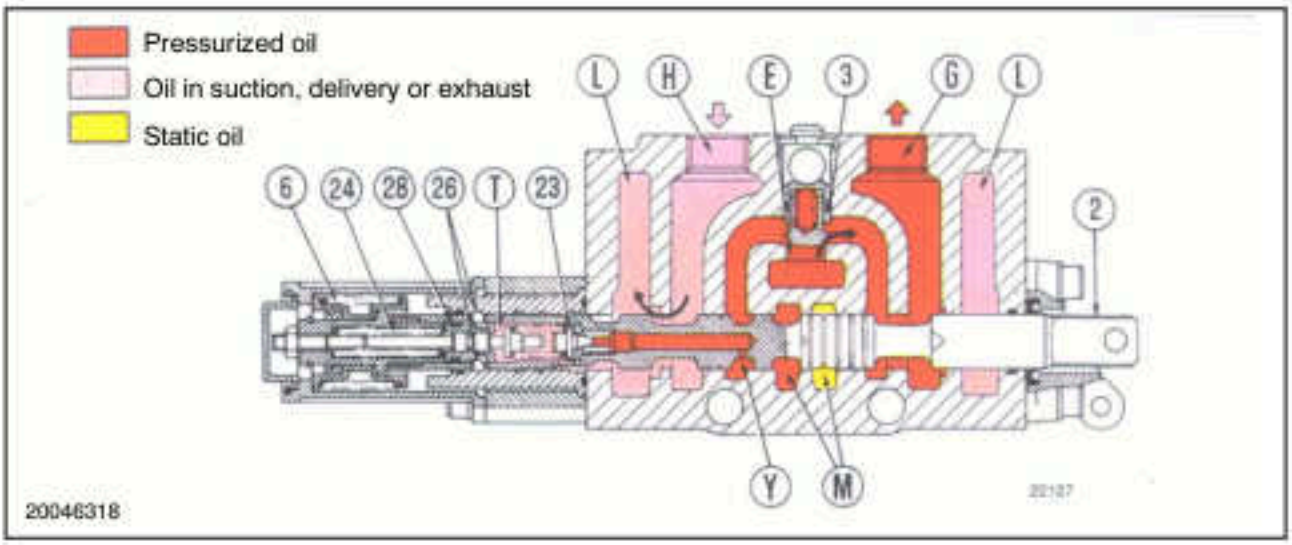
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ENGINE LUBRICATION SYSTEM DIAGRAM

1. Filler Cap
2. Safety Valve
3. Filter
4. Low Oil Pressure Warning Light
5. Dipstick
6. Oil Pump
7. Oil Pressure Relief Valve
8. Screen Filter on Supply Line

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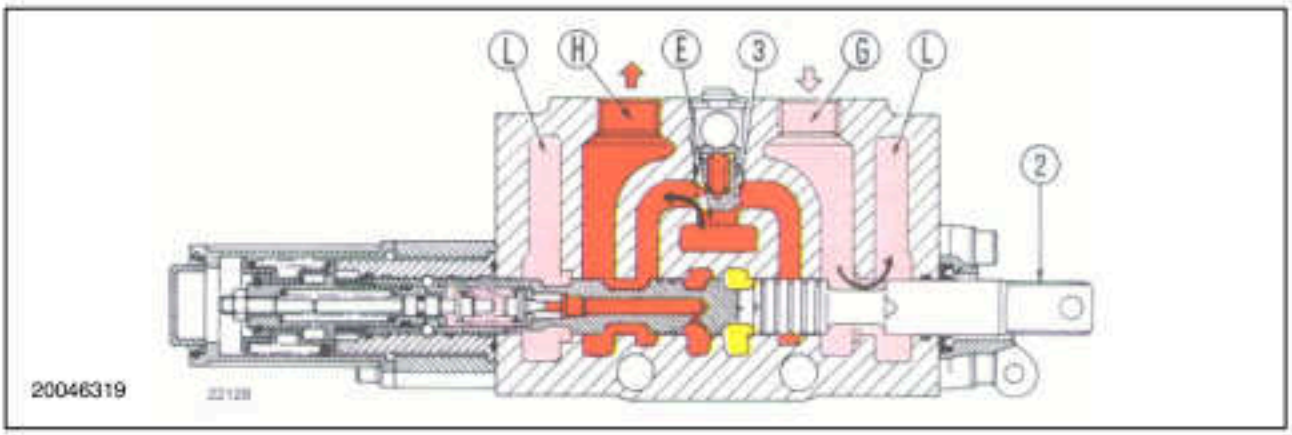
Operating Stages of Auxiliary Control Valve for the Operation of a Single/Double-Acting Cylinder with Automatic Detent Release and Float Position



9

Lifting

On pulling back the control lever (located in the cab), the spool, 2, shifts and the detent ball, 26, engage the left hand groove, where they are held in place by the support, 28, and spring, 24. The movement of the spool, 2, connects: delivery line, E, with the lower chamber of the cylinder, by way of the check valve, 3, and the line, G, and also the upper cylinder chamber with the exhaust line, L, by way of line, H, intercepting the supply of oil to the hydraulic lift control valve. On completion of the lifting movement, the oil pressure increases to 170 to 175 bar (2466 to 2538 psi), acting through the port, V, it overcomes the resistance of the spring of the needle valve, 23. Inside chamber, T, the oil pressure increases and, acting on the detent ball support, 28, it overcomes the resistance of the spring, thus moving the support, 28. In this condition the two detent balls, 26, drop onto the support, 28, releasing the spool, 2, which, under the action of the spring, 6, returns to the neutral position, and consequently the entire flow from the pump is conveyed to the lift control valve through lines, M.



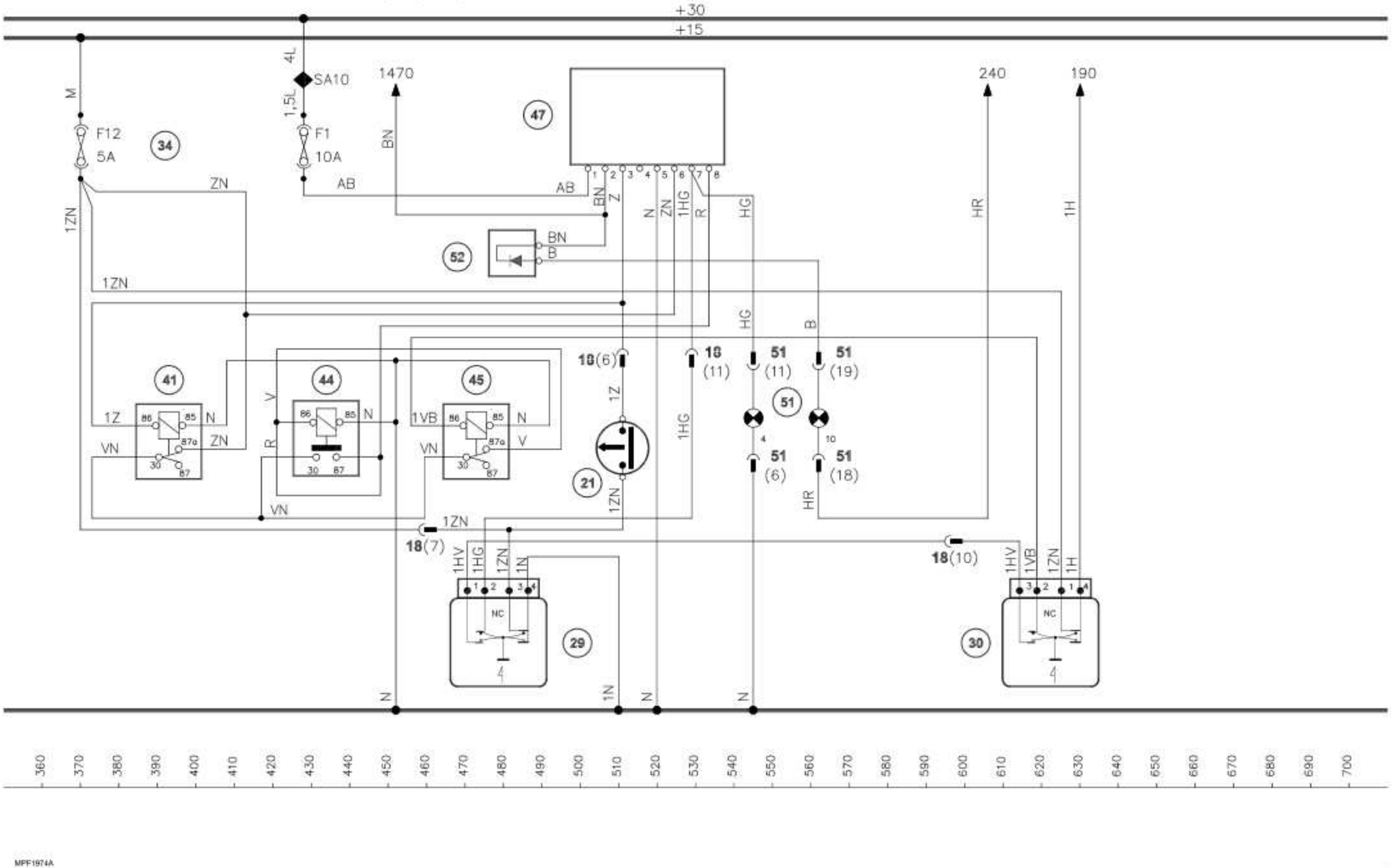
10

Lowering

To lower the implement, push forward the control lever (in the cab). The control valve spool, 2, shifts and the detent balls engage in the central groove where they are held in position by the support, 28, and the spring, 24. In this condition the oil contained in the lower chamber of the cylinder can flow to the exhaust, L, by way of line, G, while the upper chamber is connected with the delivery, E, by way of line, H, and check valve, 3. On completion of the lowering operation, the detent will be automatically released in the manner described previously.

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OPERATOR SAFETY CIRCUIT (Diagram B)



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