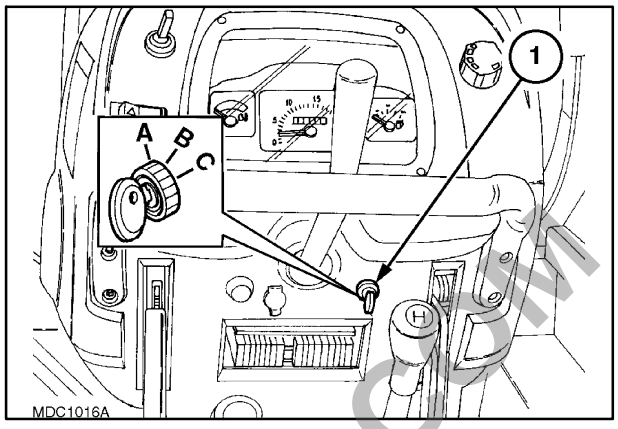
Starter Switch

Position A: All circuits OFF (the key can be extracted). Engine stopped: automatic activation of fuel injection cut-off device.

Position B: Standby for engine start up. Operation of panel lights and instruments. Power supplied to various circuits.

Position C: Engine start up (when released, the key returns automatically to position **B**).

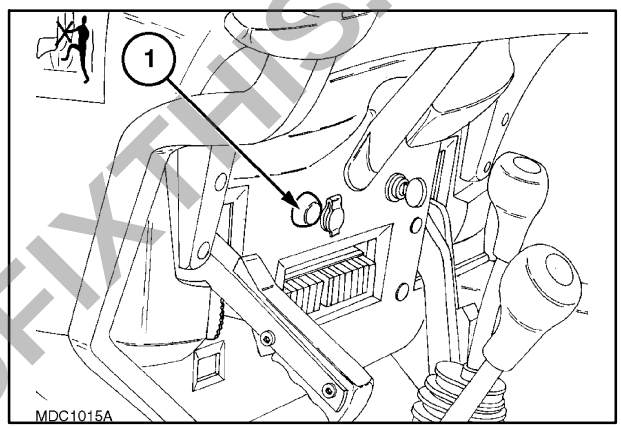


1

STARTING WITH THE THERMOSTART

Start as follows:

- Carry out operations 1 through 3 as described in “Starting the Engine.”
- Turn the ignition key to position **B** standby for engine start up (first position).
- Turn on the thermostart by pressing pushbutton, 1, and hold in position for 25 seconds.
- Move the ignition key to position **C** while continuing to hold down button, 1, until the engine starts.
- When the engine starts, release both the key and the switch. If, after two or three attempts the engine has not started, and black smoke is noted coming from the exhaust, start the engine without using thermostart.



2

IMPORTANT: *When starting the engine after extended periods of non-use, avoid using the hydraulic system immediately. All the moving parts need to be lubricated properly before they are subjected to full load.*

Especially when the external temperature approaches 0 °C (32 °F), run the engine at 1300 to 1500 rpm for approximately 5 minutes in order to heat the oil in the rear transmission to working temperature.

IMPORTANT: *If one of the warning lights illuminates to signal a fault, check and repair the faulty part.*

If the warning light continues to signal a fault, have the machine checked by your dealer.

IMPORTANT: *On models with turbocharger, run the engine at 1000 rpm for 30 seconds in order to guarantee turbocharger lubrication.*

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING

ENGINE

CONDITION	POSSIBLE CAUSE	SOLUTION
The engine will not start or starts with difficulty	Incorrect starting procedure	See starting procedure
	Fuel level low or empty	Check fuel level
	Air in fuel system	Bleed fuel system
	Engine oil viscosity not right	Use oil of right viscosity
	Fuel not suitable for ambient temperature	Use correct type of fuel for temperature conditions
	Fuel system contaminated	Clean system
	Fuel filter clogged	Replace filter element
	Fuel injector fault	Contact your dealer
The engine does not run properly and/or cuts out	Fuel system contaminated	Clean system
	Fuel injector fault	Contact your dealer
Engine does not develop full power	Engine overload	Change to lower gear or reduce load
	Air filter clogged	Carry out maintenance on air filter
	Incorrect fuel type	Use the right fuel
	Low engine operating temperature	Check thermostat
	Fuel injector fault	Have your dealer check the injectors
	Implement incorrectly set	See equipment manual
	Improper valve clearance	Check and adjust
	Idling speed too low	Contact your dealer
Abnormal engine knocking	Oil level low	Top up fluid level
	Oil pressure low	Contact your dealer
Low engine operating temperature	Thermostat malfunction	Replace thermostat
Oil pressure low	Oil level low	Add oil as required
	Oil grade or viscosity wrong	Drain and refill with oil of correct grade and viscosity
Excessive oil consumption	Oil level too high	Reduce oil level
	Oil viscosity wrong	Use oil of correct viscosity
	Oil leaking	Repair leaks
	Breather pipe filter clogged	Replace breather pipe filter

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LUBRICATION AND MAINTENANCE TABLE

The numbers in the second column are with reference to the operations and illustrations in the following pages of this section.

Hours of work	Number	Maintenance operation	Functional check	Fill–up level	Cleaning	Greasing	Adjustment	Replacement	Page
Flexible maintenance	1.	Engine Oil		●					4-6
	2.	Fan Belt					●		4-6
	3.	Radiator Expansion Tank		●					4-7
	4.	Radiator		●					4-7
	5.	PTO Clutch Lever					●		4-8
	6.	Service Brakes					●		4-8
	7.	Parking Brake		●					4-8
	8.	Main Clutch							4-9
	9.	Track Tension Rollers and Wheels	●						4-10
	10.	Track Chain					●		4-10
	11.	Steering Clutch		●					4-10
With lamp on	12.	Dry Air Filter			●				4-11
	13.	Air Filter Outlet Valve			●				4-12
	14.	Fuel Sediment Filter			●				4-12
Every 50 hours	15.	Front Leaf Spring Pivot Pin				●			4-13
	16.	Rear Support Bar Pivot				●			4-13
	17.	Fuel Filter (water separator drain)			●				4-13
	18.	Main Clutch Engagement Sleeve				●			4-14
	19.	Brakes				●			4-14
Every 300 hours	20.	Engine Oil						●	4-15
	21.	Engine Oil Filter						●	4-15
	22.	Fuel Pump			●				4-16

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HYDRAULIC LIFT

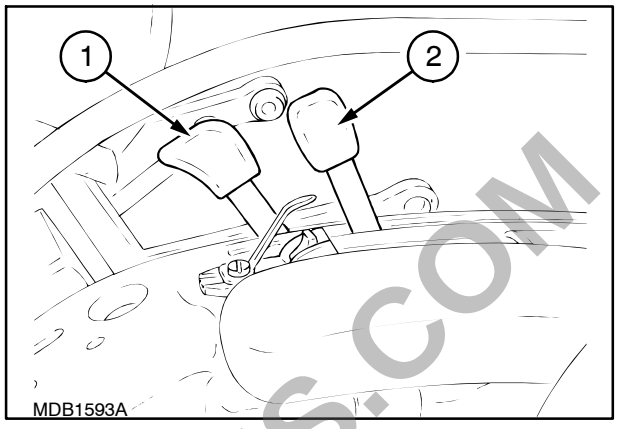
The hydraulic lift system uses the transmission oil, which is supplied by a gear pump driven by the engine timing gears.

The lift, which can detect the forces by means of a flapper spring, enables the following operations to be performed:

- Position control.
- Draft control.
- Float function.
- Mixed position and draft control.

By combined use of position control, 1, and draft control, 2, levers, the most suitable type of operation for the job in hand can be selected.

IMPORTANT: *Whenever you connect the implement to the lift, perform a full lift with the position control lever and check that the three-point linkage does not come into contact with the body of the machine. If the third point interferes with the machine, vary the position of the attachment bracket on the implement and on the top link support, or extend the lift vertical tie rods.*



12

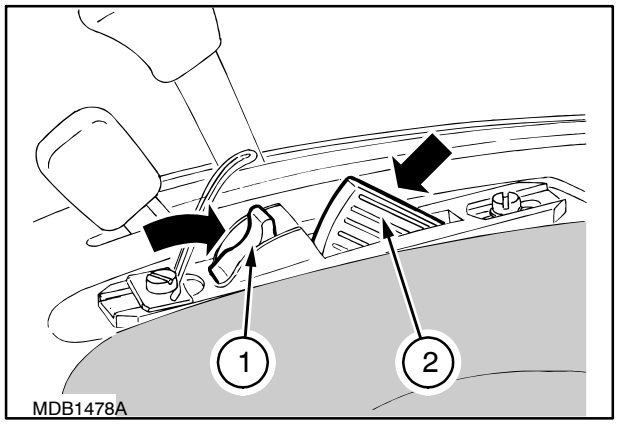
Fast Raise/Lower Control

1. Arms raise pushbutton.
2. Arms lower pushbutton.

To raise the implement quickly, whilst leaving levers, 1, and 2, figure 12 in the same position, pull pack switch, 1, figure 13 as shown by the arrow in the figure.

The button, 2, will free itself from the stop position and the implement will lift fully up.

To return to the work position, press button, 2, until it locks in position.

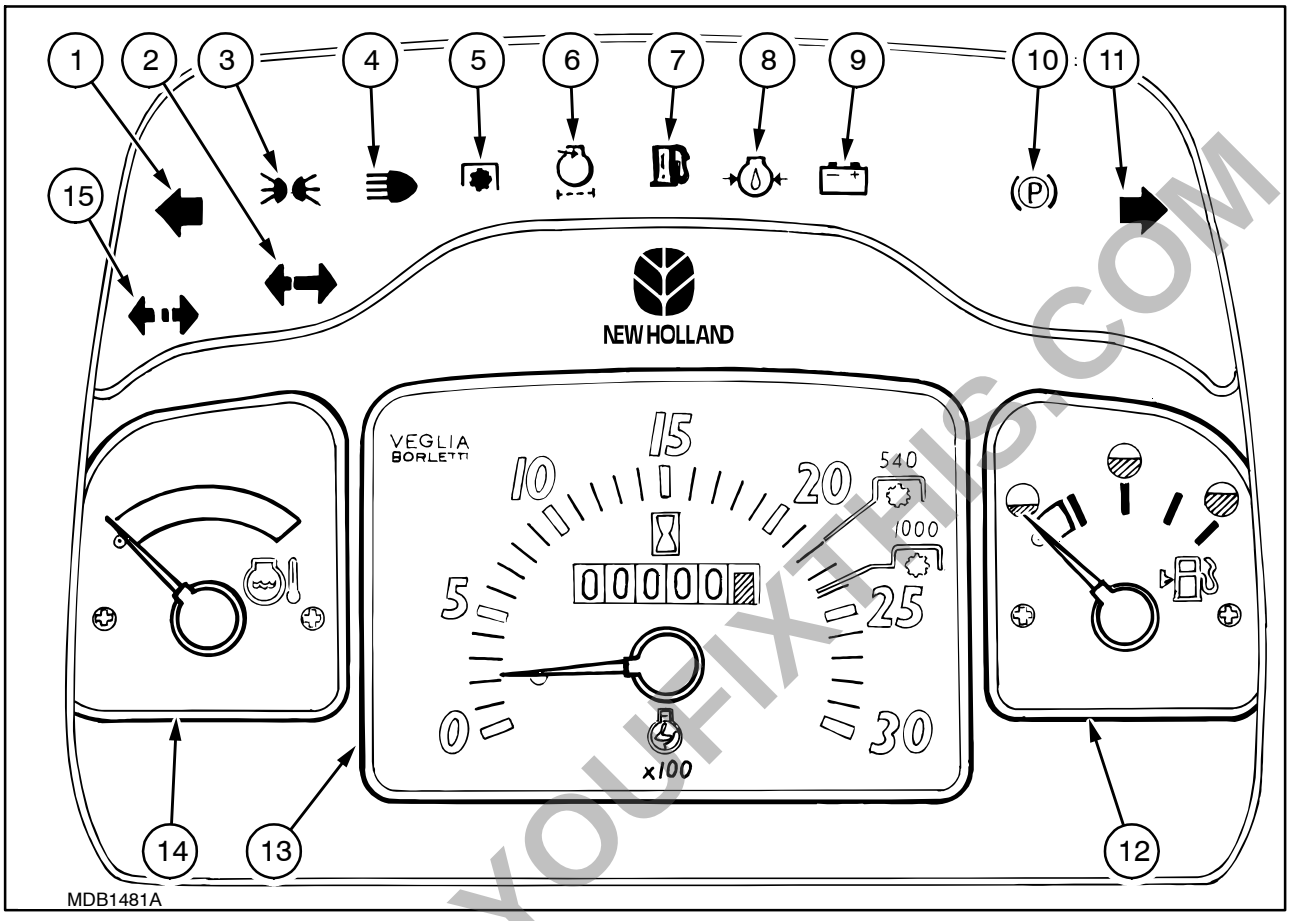


13

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

INSTRUMENT PANEL



1

1. Tractor left-hand turn direction indicator (green).

Flashes at the same time as the left-hand turn indicators.

2. Side lights ON indicator (green).

Lights up when the sidelights are switched on.

3. First trailer direction indicator (green).

Flashes at the same time as the tractor turn indicators, if connected.

4. Full beam headlights indicator (blue).

The light comes on when the headlights are on full beam.

5. Power take-off ON indicator (yellow).

Lights up when the engine is running and the power take-off is engaged or with the switch in position **B** and the PTO engaged.

6. Dry air filter clogged indicator (red).

The light comes on when the air filter cartridge is partially or totally clogged.
Stop the tractor and clean the cartridge as described in Section 4 Operation Operation 13

7. Water in fuel indicator (red).

The light illuminates to indicate that the fuel filter is clogged. Clean the filter, as described in Section 4 – Operation 14.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

WEIGHTS

The values refer to tractors fitted with: hydraulic lift, complete with implement hitching device, towing device, road pads, operator and full fuel tank.

Model	**TK75VA**	**TK80A TK90A**	**TK80MA TK90MA**	**TK100A**
Without ballast	3260 lb	4100 lb	4250 lb	4950 lb
With ballast (three plates)	3350 lb	4190 lb	4340 lb	5040 lb

ENGINE

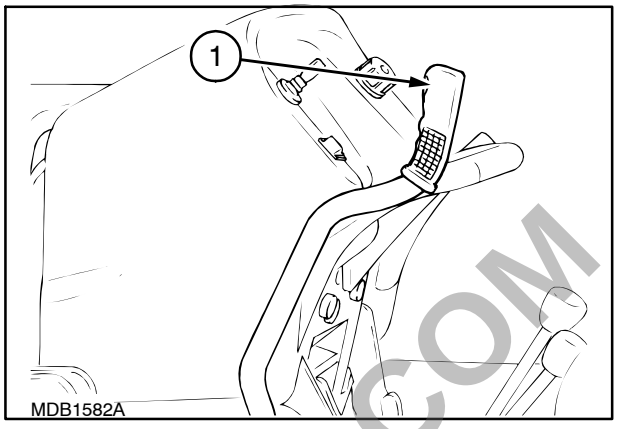
Model	**TK75VA**	**TK80A TK80MA**	**TK100A**	**TK90A TK90MA**
Engine type	IVECO			
with clutch: 11 in	8035.25	8045.05R	8045.25L	8045.25L
Injection pump	BOSCH	BOSCH		
4-stroke diesel, direct injection:				
naturally aspirated	NO	YES	NO	NO
Turbo-charged	YES	NO	YES	YES
Number of cylinders	3	4		
Bore and stroke mm (in)	104 x 115 (4.0944 x 4.5275)	100 x 115 (3.937 x 4.5275)	104 x 115 (4.0944 x 4.5275)	104 x 115 (4.0944 x 4.5275)
Compression ratio	16.5	17	16.5	16.5
Torque increase (%)	36	30	33	33
Engine max. power: 2000/25 EC				
kW	55.5	58.5	69	65.5
Hp	76	80	94	90
Total displacement cm^3	2931 (178.5 in^3)	3908 (238 in^3)		
Corresponding rpm: rev/min	2300	2500		
Maximum torque rpm: rev/min	1400	1400	1500	1500

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

STARTING THE TRACTOR

- Ensure that the central clutch lever, 1, is in the disengaged position and move the shift and range levers to the speed of the required gear (see page NO TAG).
- Accelerate the engine.
- Engage the central clutch by slowly moving the lever forward, until the tractor starts to move, then push the lever fully forward.



3

STOPPING THE TRACTOR

- Reduce engine speed.
- Disengage the central clutch lever, and move the main shift lever to the neutral position.
- Brake with both pedals; lock the handbrake with the engine stopped, engage a gear; and engage the central clutch lever.

STOPPING THE ENGINE

IMPORTANT: *On models with turbocharger, run the engine at 1000 rpm for at least 3 minutes before operating the tractor to ensure turbocharger lubrication.*

- Turn the starter key, 1, to position **A**.

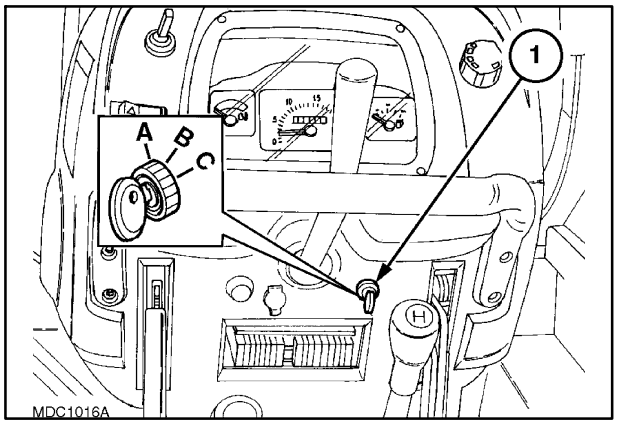
IMPORTANT: *With outside temperatures below 0 °C (32 °F), in order to prevent separation of the paraffin components in the diesel fuel, leading to a reduction in fluidity and subsequent fuel supply problems (especially when starting the engine), mix the diesel fuel with the fuel conditioner or a similar product in the proportions described on the container.*

The fuel conditioner must be mixed with the diesel fuel before there is any sign of paraffin separation; adding it later will have no effect on an engine if the cold has already caused the engine to stop running or prevent it being started.

Put the fuel conditioner in the tank first, followed by the diesel fuel.

The fuel conditioner will ensure that there is an optimum fuel supply to the engine without reducing performance, even where the external temperature drops below -20 °C (-4 °F).

See your authorized Dealer for correct fuel conditioner and amount for your area.



4

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ENGINE (continued)

CONDITION	POSSIBLE CAUSE	SOLUTION
Engine overheating	Radiator core clogged	Clean
	Engine overload	Change to lower gear or reduce load
	Engine oil level low	Top up fluid level
	Coolant level low	Top up fluid level in expansion tank. Check system for leaks
	Radiator cap defective	Replace cap
	Fan belt slipping or worn	Check tensioning device. If necessary, replace the belt
	Cooling system clogged	Flush cooling system
	Thermostat malfunction	Check thermostat
	Hoses leaking	Tighten hose connectors
	Temperature indicator or gauge malfunction	Contact your dealer
Excessive fuel consumption	Incorrect fuel type	Use right fuel type
	Air filter dirty or clogged	Carry out maintenance on air filter
	Engine overload	Change to lower gear or reduce load
	Improper valve clearance	Check and adjust
	Equipment wrongly adjusted	Refer to equipment manual for correct operation
	Engine temperature too low	Check thermostat
	Excessive ballast	Adjust ballast to correct weight
	Fuel injection nozzles clogged	Have your dealer service the injectors

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

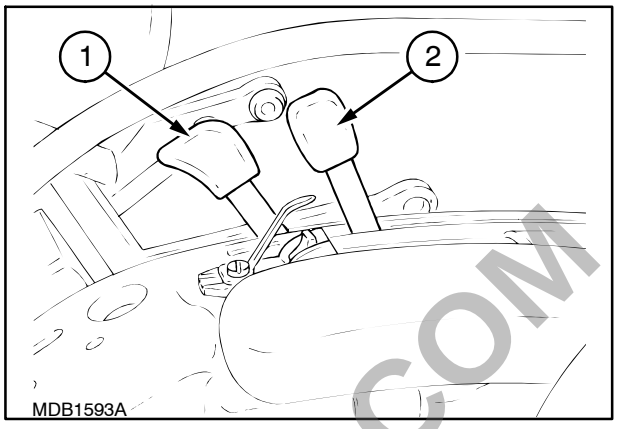
Hours of work	Number	Maintenance operation	Functional check	Fill-up level	Cleaning	Greasing	Adjustment	Replacement	Page
Every 300 hours	23.	Steering Clutches Oil Filter			●				4-16
	24.	Final Drives		●					4-16
	25.	Transmission and Lift		●					4-17
	26.	Dry Air Filter			●				4-17
	27.	Fuel Filter						●	4-17
	28.	Lift Oil Filter						●	4-18
Every 900 hours	29.	Engine Valves	●						4-19
Every 1200 hours or every year	30.	Dry Air Filter (external and internal cartridge)						●	4-20
	31.	Steering Clutches						●	4-20
	32.	Fuel Injectors	●						4-21
Every 1200 hours or every 2 years	33.	Transmission and Lift						●	4-22
	34.	Final Drives						●	4-22
	35.	Engine Cooling System			●				4-23
General maintenance	Bleed Fuel System								4-25
	Electrical System								4-26
	Recommendations for Bodywork Maintenance								4-30
	Lubricants								4-31

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

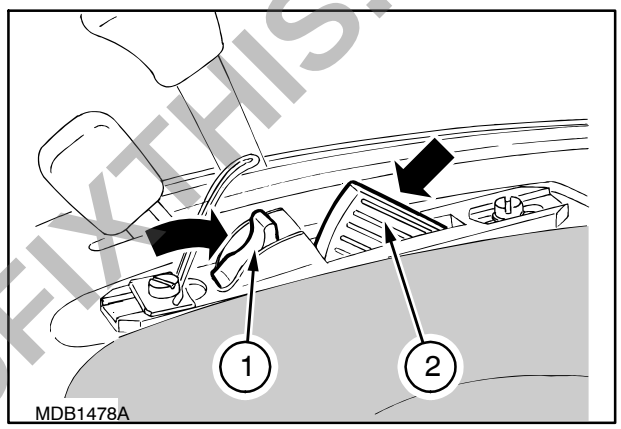
POSITION CONTROL

- Move the draft control lever, 2, fully forward.
- Set the position of the implement, either in or above the ground surface, move the lever, 1, forward to lower the implement and backward to raise it. The movement of the implement will be proportional to the movement of the lever.



14

- Push the button, 1, in the direction of the arrow to raise the implement at the headland, and fully press down the fast raise/lower control button, 2, to lower the implement when re-starting work or when necessary, without using the lift control levers.
- Raise the implement at the headland, using only the fast raise/lower controls, 1, and, 2.



15

DRAFT CONTROL

- Move the position control lever, 1, fully forward.
- Set the desired implement depth by gradually moving the draft control lever, 2. The depth reached by the implement is proportional to the traction power which, in turn, is determined by the consistency of the ground. In these conditions, the lift will automatically maintain the traction power required from the tractor at a constant level.

NOTE: *Do not use the position and draft control levers to raise and lower implements, as this will change the previously set operating conditions.*

FLOAT MODE

- To operate the lift in float mode, i.e.: with free arm movement for the full length of travel, move both levers, 1, and, 2, figure 14 fully forward.
- The lift should only be used to lower and raise the implement at the headland; to carry out this operation, use only the fast raise/lower control pushbuttons.

PREVIEW - YOUFIXTHIS.COM

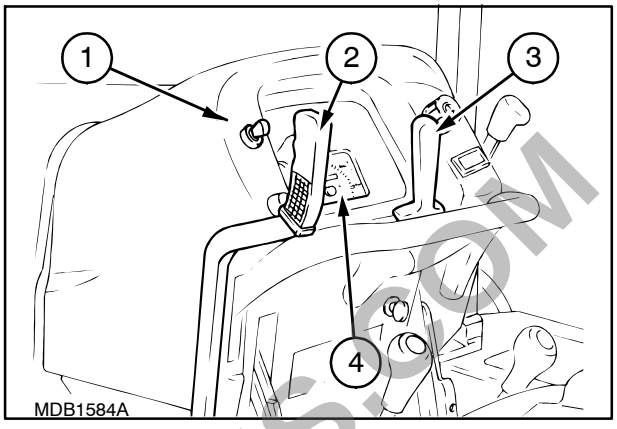
Download full manual at youfixthis.com

CONTROLS AND INSTRUMENTS

1. **Control panel.**
2. **Central clutch control lever:**
   - Forward = clutch engaged.
   - Rearward = clutch disengaged.

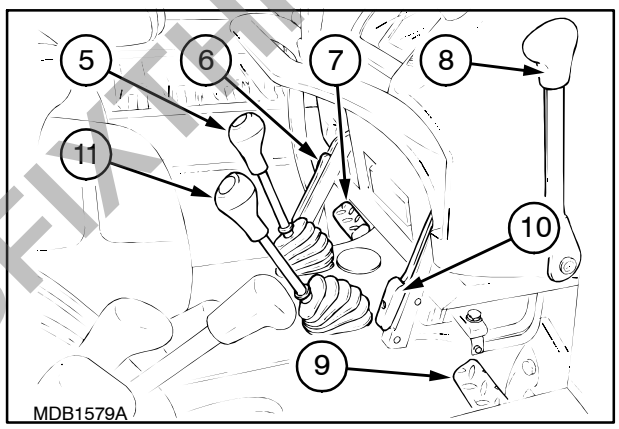
NOTE: *To engage the clutch, the lever must be fully pushed forward.*

3. **Steering clutches lever:**
   - Positioned to the left: left-hand clutch.
   - Positioned to the right: right-hand clutch.
4. **Control panel.**



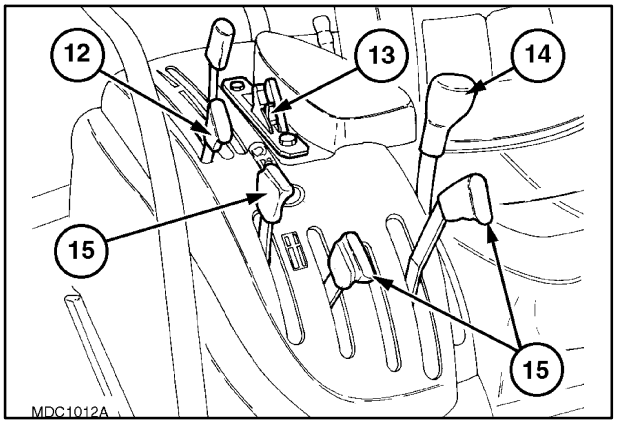
4

5. **Range lever.**
6. **Handbrake lever:**
   - Raised = brake locked.
   - Horizontal = brake released.
7. **LH brake pedal.**
8. **Engine throttle lever.**
9. **RH brake pedal.**
10. **PTO clutch lever.**
11. **Main gearshift lever.**



5

12. **Hydraulic lift levers.**
13. **Fast Raise/Lower controls.**
14. **Shuttle lever**
15. **Remote control valve levers.**



6

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TIMING SYSTEM

With overhead valves	Timing data
Inlet:	
- start before TDC	12°
- end after BDC	31°
Exhaust:	
- start before BDC	50°
- end after TDC	16°
Valve clearance, timing inspection: . . . . . mm (in)	0.45 (0.0177)
Valve clearance, engine cold:	
- inlet and exhaust . . . . . mm (in)	(0.30 – 0.05 (0.0118 – 0.0019)

FUEL SYSTEM

Double-diaphragm fuel pump on injection pump supply line.

BOSCH rotary injection pump with centrifugal speed governor, operating at all speeds and incorporating automatic advance type VE4 (models TK80A, TK90A, and TK100A) or VE3 (model TK75VA).

- Replaceable cartridge filter on the injection pump feed line with water separator.
  Fuel sediment filter;
- Dual cartridge dry air filter with clogged filter indicator with centrifugal pre-filter.

Injection pump timing on the engine:	**TK75AV**	**TK80A TK80MA**	**TK90A TK90MA**	**TK100A**
Before TDC of cylinder No. 1 during the compression stroke	4° ± 1°			
Fuel Tank Capacity	80 L (21 gal)	121 L (32 gal)		

Fuel injectors:	**TK75AV**	**TK80A TK80MA**	**TK90A TK90MA**	**TK100A**
– order of injection	1 – 2 – 3	1 – 3 – 4 – 2		
- number of injection nozzles:	5	4	4	3
- pressure setting: bar (psi)	260 to 272 (3770 to 3944)			

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 124 pages

The full manual includes:

- All 124 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

New Holland TK75VA, TK80A, TK80MA, TK90A, TK90MA, TK100A Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual