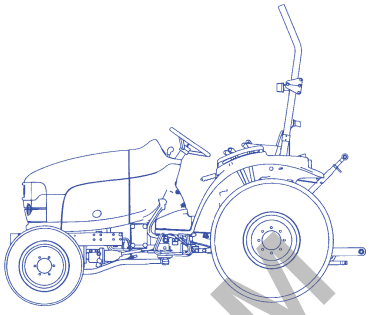
NEW HOLLAND

TC27D

Compact Tractor

OPERATOR'S MANUAL



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SAFETY PRECAUTIONS

PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements (“CAUTION”, “WARNING”, and “DANGER”) followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.

CAUTION: *The word “*CAUTION*” is used where a safe behavioral practice according to operating and maintenance instructions and common safety practices will protect the operator and others from accident involvement.*

WARNING: *The word “*WARNING*” denotes a potential or hidden hazard which has a potential for serious injury. It is used to warn operators and others to exercise every appropriate means to avoid a surprise involvement with machinery.*

DANGER: *The word “*DANGER*” denotes a forbidden practice in connection with a serious hazard.*

*Failure to follow the “*CAUTION*”, “*WARNING*”, and “*DANGER*” instructions may result in serious bodily injury or death.*

MACHINE SAFETY

Additional precautionary statements (“ATTENTION” and “IMPORTANT”) are followed by specific instructions. These statements are intended for machine safety.

ATTENTION: *The word “*ATTENTION*” is used to warn the operator of potential machine damage if a certain procedure is not followed.*

IMPORTANT: *The word “*IMPORTANT*” is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.*

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ENGINE

Type . . . . . Diesel

Engine gross horsepower 27.3

Cylinders 3

Bore . . . . . 84 mm
3.31 in.

Stroke . . . . . 80 mm
3.15 in.

Displacement . . . . . 1.33 litre
81.2 in^3

Compression ratio 23:1

Firing order 1–2–3

Low idle speed . . . . . 900 rev/min

High idle speed . . . . . 2840 rev/min

Rated speed . . . . . 2600 rev/min

Valve clearance (cold):
Inlet . . . . . 0.20 mm
0.008 in.

Exhaust . . . . . 0.20 mm
0.008 in.

CAPACITIES

Fuel tank . . . . . 27.6 litres
6 Imp. galls

Cooling system:
Less cab . . . . . 4.0 litres
7.0 Imp. pints

With cab . . . . . litres
Imp. pints

Engine crankcase:
Less filter . . . . . 4.0 litres
7.0 Imp. pints

With filter . . . . . 4.5 litres
7.9 Imp. pints

CAPACITIES (continued)

Rear axle and hydraulics
(with 9 x 3 . . . . . 32.5 litres
transmission) 7.15 Imp. galls

Rear axle and hydraulics
(with hydrostatic . . . . . 33.3 litres
transmission) 7.33 Imp. galls

Power steering . . . . . 1.6 litres
2.8 Imp. pints

Front axle . . . . . 0.8 litres
final reduction 1.4 Imp. pints

Front axle . . . . . 1.4 litres
differential case 2.5 Imp. pints

Clutch housing . . . . . 0.3 litres
10.0 fl. oz.

COOLING SYSTEM

Type . . . . . Pressurized liquid with recirculating bypass

Water pump:
Type . . . . . Centrifugal

Drive . . . . . V–belt

Belt deflection when 9 – 11 kg (20 – 25 lbf.) thumb pressure is applied midway between the belt pulleys . . . . . 10 – 15 mm
0.44 – 0.56 in.

Fan diameter . . . . . 340 mm
13.4 in.

Thermostat:
Starts to open at . . . . . 71 ° C
160 ° F

Fully open at . . . . . 85 ° C
185 ° F

Radiator cap . . . . . 0.9 bar
13 lbf. in^2

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LUBRICATION AND MAINTENANCE CHART

Service Interval	Opn. No.	Lubrication and Maintenance Item	Check	Clean	Lubricate	Drain	Wash	Change	Adjust
Every 10 hours	1	Engine oil level	X						
	2	Windscreen washer reservoir (where fitted)	X						
	3	Air cleaner	X						
	4	Radiator coolant	X						
First 50 hours only		See text on page 7 for service requirements.							
Every 50 hours	5	Cab air filter (where fitted)		X					
	6	Clutch housing oil level (Super Steer™ only)	X						
	7	Battery	X						
	8	Transmission, rear axle and hydraulic oil level	X						
	9	Power steering oil level	X						
	10	Clutch pedal							X
	11	Front axle and final reduction gear oil level	X						
	12	Fan belt	X						
	13	Tyres	X						
	14	Fuel filter				X			
	15	**Lubrication fittings:**							
		Steering linkage			X				
		3-point linkage			X				
		Front axle pivot			X				
		Pedal shaft - clutch and brake pedals			X				
		Power steering cylinder			X				
Every 100 hours	16	Engine oil and filter						X	
	17	Air cleaner primary element		X					
	18	Fuel filter		X					
Every 200 hours	NO TAG	Fuel filter element						X	
	NO TAG	Foot brakes							X
	NO TAG	Hand brake							X
	NO TAG	Fan belt	X						X
	NO TAG	Wheel bolt torque							X
Every 300 hours	24	Cab air filter					X		
	25	Transmission, rear axle and hydraulic oil						X	
	26	Hydraulic filter						X	
	27	HST transmission filter						X	
	28	Front axle and final reduction gear oil						X	
Every 600 hours	29	Clutch housing oil						X	
	30	Power steering oil and filter						X	
	31	Fuel injectors	X						X
	32	Valve clearance	X						X
Seasonal	33	Radiator coolant						X	
	34	Cab air filter						X	
	35	Air cleaner primary element						X	
Special service	36	Air cleaner inner element						X	
General maintenance	37 to 44	See text on pages 32 to 38 for service requirements.							

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SECTION 2
CONTROLS, INSTRUMENTS AND OPERATION

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BEFORE OPERATING

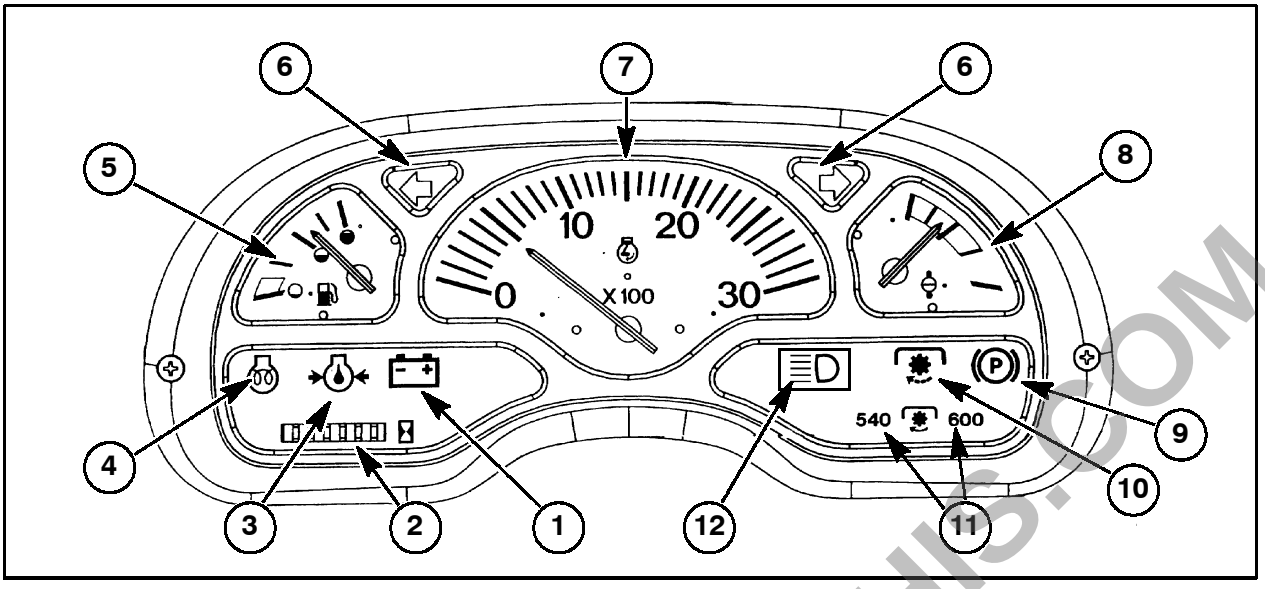
Read this section thoroughly. It details the location and operation of the various instruments, switches and controls on your tractor. Even if you operate other tractors, you should thoroughly read this section of the manual and ensure that you are familiar with the location and function of all the features of the tractor.

Do not start the engine or attempt to drive or operate the tractor until you are fully accustomed to all the controls. It is too late to learn once the tractor is moving. If in doubt about any aspect of operation of the tractor, consult your authorised dealer.

Pay particular attention to the recommendations for running-in to ensure that your tractor will give the long and dependable service for which it was designed.

See Section 3 for lubrication and maintenance requirements. Tractor specifications are listed in Section 4. A full index is provided at the end of this book.

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INSTRUMENT PANEL

1. **Battery Charge Warning Light** – Illuminates when the key switch is in the “ON” or “HEAT” positions and goes out when the engine is started. If the bulb lights during operation, it indicates that the charging system is not operating normally. As the battery can become fully discharged, the problem should be investigated as soon as possible.

2. **Proof Meter** – Records the hours and portions of hours that your tractor has been operated regardless of engine speed. Use the proof meter as a guide to determine hourly service intervals.

3. **Engine Oil Pressure Warning Light** – Illuminates with the key switch in the “ON” or “HEAT” positions and remains lit for a short period of time after the engine is started. The light indicates oil pressure only and goes out when oil pressure is sufficient. If the bulb lights during operation, stop the tractor engine immediately and investigate the cause.

4. **Cold Starting Indicator Light** – Illuminates when the key switch is turned to the “HEAT” position. It remains lit for approximately four seconds, when the key is held in position, during which time the glow plugs are heating the precombustion chambers.

5. **Fuel Gauge** – Indicates the amount of fuel remaining in the tank. The gauge is activated when the key switch is in the “ON” or “HEAT” positions. It will register empty with the key switch in the “STOP” position.

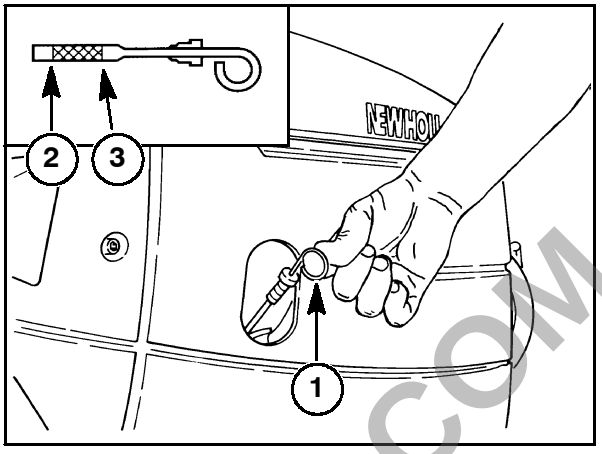
6. **Turn Indicator Warning Lights** – Flash in unison with the turn indicators. Both warning lights will flash when the hazard warning light switch is activated.

7. **Tachometer** – Registers engine speed (revolutions per minute). The gauge is marked in increments of 100 and will return to zero when the engine is not running.

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EVERY 10 HOURS OR DAILY (Every 10 hours of operation or daily, whichever occurs first, carry out the following):



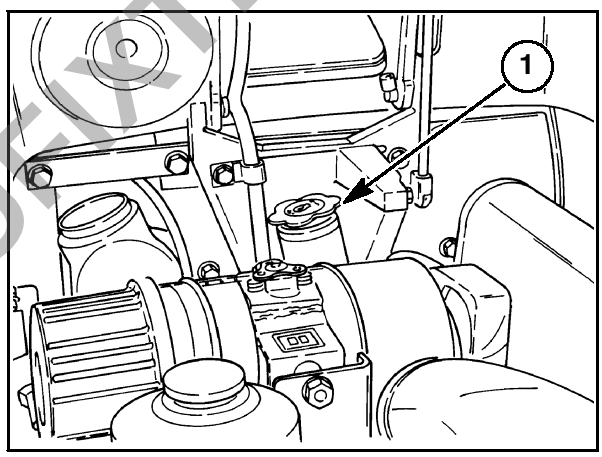
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OPERATION 1

CHECK ENGINE OIL LEVEL

1. After the engine has been stopped for a period of time and with the tractor standing level, check the oil level using the dipstick (1) Figure 4. Oil level is correct when it is between the low and full marks (2) and (3).

2. If the oil level is low, remove the filler cap (1) Figure 5, and add fresh oil through the filler hole. Add enough oil so that the level registers between the two marks on the dipstick. Do not overfill.



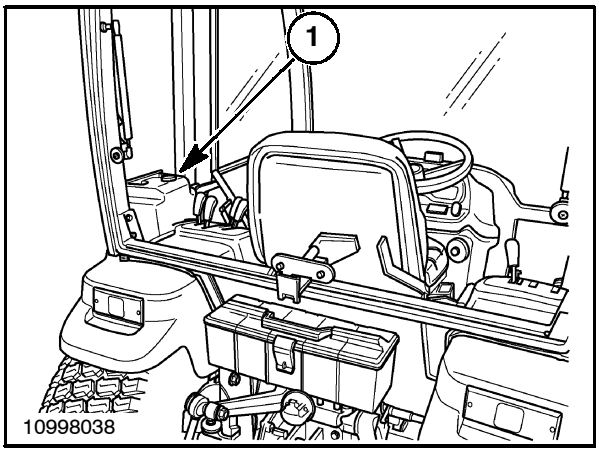
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OPERATION 2

CHECK WINDSCREEN WASHER RESERVOIR (where fitted)

The reservoir for the windscreen washers is located inside the cab on the left-hand side at the rear. The same reservoir is utilised for both front and rear windscreen washers, if fitted.

Lift off the cap (1) and fill with washer solvent solution. In cold weather, use a solvent with anti-freeze properties.



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