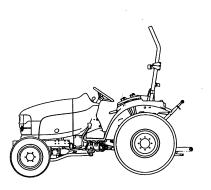
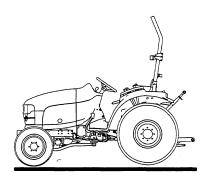
# NEW HOLLAND TC27D Compact Tractor





**86543863** 4/99



# **OPERATOR'S MANUAL**

# NEW HOLLAND TC27D

**Compact Tractor** 



# **AIRBORNE NOISE EMISSION**

In accordance with E.E.C. directives, the noise levels of tractors covered by this Manual and marketed within the European Economic Community are as follows:

#### WITH CAB

		Noise level at	External noise	
Model	Drive line	Closed - dB(A)	Open - dB(A)	level - dB(A)**
TC27D	9 x 3 transmission	84.5	86.5	77
TC27D	Hydrostatic transmission	85	88	77

<sup>\*</sup>The noise level at the operator's ear is with all cab windows, doors and roof hatch (where fitted) open or closed, as indicated. Test results are in accordance with directive 77/311/EEC Annex I.

#### WITHOUT CAB

Model	Drive line	Noise level at operator's ear - dB(A)*	External noise level - dB(A)**	
TC27D	9 x 3 transmission	86	78	
TC27D	Hydrostatic transmission	86	79	

<sup>\*</sup> Test results are in accordance with directive 77/311/EEC Annex II.

<sup>\*\*</sup> Test results are in accordance with directive 74/151/EEC Annex VI 1. 4. 2, with tractor stationary.

<sup>\*\*</sup> Test results are in accordance with directive 74/151/EEC Annex VI 1. 4. 2, with tractor stationary.

# **CONTENTS**

SECTION 1 - INTRODUCTION
General Information
Identification Plate 1–
To the Owner
Safety Precautions
Safety Decals
Hardware Torque Charts 1–8
International Symbols 1–10
SECTION 2 - OPERATION
Seat, Seat Belt and ROPS2-2
Safety Cab
Instrument Panel and Starting the Engine
Instrument Console
Brakes and Front Wheel Drive
Transmissions
Differential Lock
Power Take-off
Swinging Drawbar and Three-point Linkage 2–2
Super Steer™ Axle 2–22
Tractor Hydraulics
Wheel Tread Settings 2–26
Tractor Weighting
SECTION 3 – LUBRICATION AND MAINTENANCE
Lubrication and Maintenance Chart
Service – Every 10 Hours or Daily
Service – First 50 Hours only
Service – Every 50 Hours
Service – Every 100 Hours
Service – Every 200 Hours
Service – Every 300 Hours
Service – Every 600 Hours
Service – Seasonal
Service – Special Air Cleaner Service
General Maintenance
General Maintenance 3-02

#### **SECTION 4 - SPECIFICATIONS**

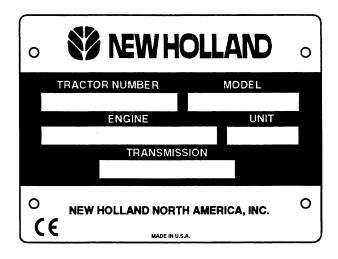
#### PRE-DELIVERY INSPECTION CHECK LIST

# SECTION 1 GENERAL INFORMATION

#### PLEASE READ CAREFULLY:

For a complete list of the pre-delivery service checks performed by your dealer, refer to the PRE-DELIVERY INSPECTION check list found at the back of this manual. Keep one copy as your record of the service performed. The other copy should be removed from the manual and kept by your dealer. MAKE SURE THAT BOTH COPIES ARE COMPLETED AND THAT YOU AND THE DEALER SIGN BOTH COPIES.

A PRODUCT IDENTIFICATION PLATE is located on the left-hand side of the transmission housing. The numbers on the plate are important in the event your tractor should require future service. For your convenience, have your dealer record these numbers in the appropriate spaces below.



New Holland policy is one of continuous improvement and the right to change prices, specification or equipment at any time without notice is reserved.

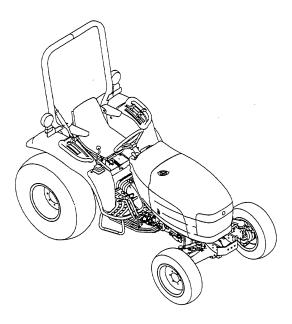
All data given in this manual is subject to production variations. Dimensions and weight are approximate only. The illustrations do not necessarily show tractors in standard condition or imply that these features are available in all countries. For exact information about any particular tractor, please consult your New Holland dealer.

## TO THE OWNER

This manual contains information concerning the operation, adjustment, and maintenance of the Model TC27D Compact tractor. You have purchased a dependable machine, but only by proper care and operation can you expect to receive the performance and long service built into this tractor. Please have all operators read this manual carefully and keep the manual available for ready reference.

Your New Holland dealer will instruct you in the general operation of your tractor. (See also, the Pre-Delivery check list at the back of this Manual). Your dealer's staff of factory-trained service technicians will be glad to answer any questions that may arise regarding the operation of your tractor.

Your New Holland dealer carries a complete line of genuine New Holland parts. These parts are manufactured and carefully inspected to insure high quality and accurate fitting of any necessary replacement parts.



A

**CAUTION:** This symbol is used throughout this book whenever personal safety is involved. Take time to read and follow the instructions. Be careful!

**CAUTION:** Pictures in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment. Be certain, however, to close or replace all shielding before operating the machine.

#### 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.

## **SAFETY PRECAUTIONS**

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read and take the following precautions before operating this tractor. Equipment should be operated only by those who are responsible and instructed to do so.

#### THE TRACTOR

- Read the Operator's Manual carefully before using the tractor. Lack of operating knowledge can lead to accidents.
- Use an approved roll bar for safe operation. Overturning a tractor without a roll bar can result in death or injury. If your tractor is not equipped with a roll bar, see your New Holland Dealer.
- If a front end loader is to be installed, always use a FOPS (Falling Object Protective Structure) canopy to avoid injury from falling objects.
- Use the handholds and step plates when getting on and off the tractor to prevent falls. Keep steps and platform cleared of mud and debris.
- 5. Do not permit anyone but the operator to ride on the tractor. There is no safe place for extra riders.
- Keep all safety decals clean of dirt and grime, and replace all missing, illegible, or damaged safety decals. See the list of decals in the Decal section of this manual.

#### **SERVICING THE TRACTOR**

- The cooling system operates under pressure which is controlled by the radiator cap. It is dangerous to remove the cap while the system is hot. Always turn the cap slowly to the first stop and allow pressure to escape before removing the cap entirely.
- Keep any type of open flame away from the tractor and do not smoke while refueling. Wait for the engine to cool before refueling.
- Keep the tractor and equipment, particularly brakes and steering, maintained in a reliable and satisfactory condition to ensure your safety and comply with legal requirements.

- 4. Keep open flame or cold weather starting aids away from the battery to prevent fires or explosions. Use jumper cables according to instructions to prevent sparks which could cause explosion.
- 5. Stop the engine before performing any service on the tractor.
- Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury. If fluid is injected into the skin, obtain medical attention immediately or gangrene may result.
- Do not use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.
- Stop the engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting the engine or pressurising lines.
- Do not modify or permit anyone else to modify or alter this tractor or any of its components or functions without first consulting a New Holland Dealer.
- 8. The fuel oil in the injection system is under high pressure and can penetrate the skin. Unqualified persons should not remove or attempt to adjust a pump, injector, nozzle, or any other part of the fuel injection system. Failure to follow these instructions can result in serious injury.
- Continuous long-term contact with used engine oil may cause skin cancer. Avoid prolonged contact with used engine oil. Wash skin promptly with soap and water.
- 10. Some components of your tractor, such as gaskets and friction surfaces (brake linings, clutch linings, etc.) may contain asbestos. Breathing asbestos dust is dangerous to your health. You are advised to have any maintenance or repair on such components carried out by an authorised New

Holland Dealer. However, if service operations are to be undertaken on parts that contain asbestos, the essential precautions listed below must be observed:

- Work out of doors or in a well ventilated area.
- Dust found on the tractor or produced during work on the tractor should be removed by extraction, not by blowing.
- Dust waste should be dampened, placed in a sealed container, and marked to ensure safe disposal.
- If any cutting, drilling, etc. is attempted on materials containing asbestos, the item should be dampened and only hand tools or low speed power tools used.

#### **OPERATING THE TRACTOR**

- Before starting the tractor, apply the parking brake, place the PTO lever in the "OFF" position, the lift control lever in the down position, the remote control valve levers in the neutral position, and the transmission in neutral.
- Always sit in the tractor seat when starting the engine or operating controls. Do not start the engine or operate controls while standing beside the tractor.
- Do not bypass the neutral start switches. Consult your New Holland Dealer if your neutral start controls malfunction. Use jumper cables only in the recommended manner. Improper use can result in tractor runaway.
- 4. Avoid accidental contact with the gear shift lever while the engine is running, as this can cause unexpected tractor movement.
- 5. Before getting off the tractor, disengage the PTO, turn the engine off, and apply the parking brake. Never get off the tractor while it is in motion.
- 6. Do not park the tractor on a steep incline.
- 7. Do not operate the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes can cause death or illness.
- 8. If the power steering or engine ceases operating, stop the tractor immediately.

- Pull only from the drawbar or the lower link drawbar in the down position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to upset.
- 10. If the front end of the tractor tends to rise when heavy implements are attached to the three-point hitch, install front end or front wheel weights. Do not operate the tractor with a light front end.
- 11. Always set the hydraulic selector lever in position control when attaching or transporting equipment. Ensure hydraulic couplers are properly mounted and will disconnect safely in case of accidental detachment of implement.
- 12. Do not leave equipment in the raised position.
- 13. Use a rotating beacon when travelling on public roads, unless prohibited by law.
- 14. When operating at night, adjust lights to prevent blinding oncoming drivers.

#### DRIVING THE TRACTOR

- 1. Watch where you are going, especially at row ends, on roads, around trees and low hanging obstacles.
- To avoid upsets, drive the tractor with care and at a safe speed. Use extra caution when operating over rough ground, when crossing ditches or slopes, and when turning corners.
- 3. To provide two-wheel braking, lock tractor brake pedals together when transporting on roads.
- 4. Do not coast or free wheel down hills. Use the same gear when going downhill as is used when going uphill.
- 5. Any towed vehicle with a total weight exceeding that of the towing tractor should be equipped with brakes for safe operation.

- If the tractor becomes stuck or the tires become frozen to the ground, back up the tractor to prevent upset.
- Always check overhead clearance, especially when transporting the tractor.
- 8. When operating at night, adjust lights to prevent blinding oncoming drivers.

#### **OPERATING THE PTO**

- When operating PTO driven equipment, shut off the engine and wait until the PTO stops before getting off the tractor and disconnecting the equipment.
- 2. Do not wear loose clothing when operating the power take-off or when near rotating equipment.
- When operating stationary PTO driven equipment, always place both gear shift levers in neutral, apply the tractor parking brake, and block the rear wheels front and back.
- To avoid injury, do not clean, adjust, unclog, or service PTO driven equipment when the tractor engine is running.
- Ensure the PTO master shield is installed at all times. Always replace the PTO shield cap when the PTO is not in use.

#### **DIESEL FUEL**

- Under no circumstances should gasoline, alcohol, or blended fuels be added to diesel fuel. These combinations can create an increased fire or explosive hazard. Such blends are more explosive than pure gasoline in a closed container such as a fuel tank. Do not use these blends.
- 2. Never remove the fuel cap or refuel with the engine running or hot.
- 3. Do not smoke while refueling or when standing near fuel.

- 4. Maintain control of the fuel filler pipe nozzle when filling the tank.
- 5. Do not fill the fuel tank to capacity. Allow room for expansion.
- 6. Wipe up spilled fuel immediately.
- 7. Always tighten the fuel tank cap securely.
- 8. If the original fuel tank cap is lost, replace it with a New Holland approved cap. A non-approved, proprietary cap may not be safe.
- 9. Keep equipment clean and properly maintained.
- 10. Do not drive equipment near open fires.
- 11. Never use fuel for cleaning purposes.
- 12. Arrange fuel purchases so that Summer grade fuels are not held over and used in Winter.

#### **SAFETY FRAME (ROPS)**

Your New Holland tractor is equipped with a safety frame. It must be maintained in a serviceable condition. Be careful when driving through doorways or working in confined spaces with low headroom.

#### Under no circumstances should you:

- modify, drill, or alter the safety frame in any way.
   Doing so may render you liable to legal prosecution.
- attempt to straighten or weld any part of the main frame or retaining brackets which have suffered damage. Doing so may weaken the structure and endanger your safety.
- secure any parts on the main frame or attach your safety frame with anything other than the special high tensile bolts and nuts specified.
- attach chains or ropes to the main frame for pulling purposes.
- take unnecessary risks even though your safety frame affords you the maximum protection possible.

## SAFETY DECALS

If safety decals become damaged or illegible, new decals should be obtained from your New Holland Dealer and placed in their original positions.

#### **SAFETY DECALS**



#### WARNING

In an overturn hold on tightly to steering wheel. Do not attempt to jump out.

#### **ADVARSEL**

Ved væltning: Hold fast i rattet spring ikke af.

#### WAARSCHUWING

Als de traktor kanteit spring er niet af, maar houd u stevigvast aan het stuur.

#### **VAROITUS**

Pidā kilnni ohjauspyörāstā traktorin kastuessa ālā hyppāā.

#### ATTENTION

En cas de retournement du tracteur se cramponner au volant. Ne pas tenter de sauter.

#### **ACHTUNG**

Wenn Traktor kippt, festhalten am Lenkrad, nicht abspringen!

#### ATTENZIONE

In caso di ribaltamento, tenersi saldamente al volante senza tentare di saltare fuori.

#### **ADVARSEL**

Hold fast i rattet hvis traktoren veiter. Hopp ikke av!

#### **CUIDADO**

Se a unidade se voltar, sigure se bem ac volante. Não tente saltar para fora.

#### **CUIDADO**

En caso de volcar del tractor, no salter abajo pero aggarrarse a la rueda del timon.

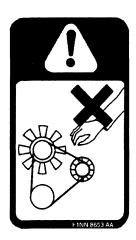
#### **VARNING**

Häll fast i ratten om traktom stjälper hoppa ej.

#### ΠΡΟΣΟΧΗ

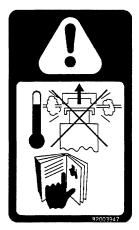
ΣΕ ΠΕΡΙΠΤΩΣΗ ΤΟΥΜΠΑΣ ΚΡΑΤΗΘΕΙΤΕ ΔΥΝΑΤΑ ΣΤΟ ΤΙΜΟΝΙ. ΜΗΝ ΠΡΟΣΠΑ-ΘΕΙΣΈΤΕ ΝΑ ΠΗΔΗΞΕΤΕ ΠΡΟΣ ΤΑ ΕΞΩ.

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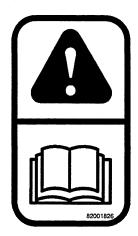
# Location: Left- and right-hand side of radiator

To prevent serious injury, keep hands and clothing away from rotating fan and drive belt.



# 2. Location: Right-hand side of radiator

Warning! Pressurised cooling system. Allow to cool then remove cap carefully. Using a cloth, turn cap to the first stop and allow pressure to subside before removing cap completely.



# 3. Location: Underside of hood and rear of instrument console

General warning. Read and understand all the warning notes printed in this Operator's Manual. In particular, see pages iii to vi inclusive.



#### 4. Location: Top of battery

5. Location: ROPS frame

In an overturn, hold on

tightly to the steering wheel. Do not attempt to jump out.

(inside cab)

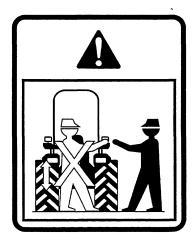
(less cab) or 'B' pillar

Danger! Corrosive acid. Explosive gas. Wear eye protection. Avoid producing sparks. See Operator's Manual.



# 6. Location: On PTO shield

General warning.



# 7. Location: Rear of both fenders

To avoid injury, do not stand on the implement or between the implement and tractor while making adjustments or connecting/disconnecting implements.

## MINIMUM HARDWARE TIGHTENING TORQUES

#### IN POUNDS-FEET (NEWTON-METRES) FOR NORMAL ASSEMBLY APPLICATIONS

#### INCH HARDWARE AND LOCKNUTS

	SAE GRADE 2		SAE GRADE 5		SAE GRADE 8		LOCKNUTS		
NOMINAL SIZE	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	UNPLATED or PLATED SILVER	PLATED W/ZnCr GOLD	GR.B w/GR5 BOLT	GR.C w/GR8 BOLT	NOMINAL SIZE
1/4	55* (6.2)	72* (8.1)	86* (9.7)	112* (13)	121* (14)	157* (18)	61* (6.9)	86* (9.8)	1/4
5/16	115* (13)	149* (17)	178* (20)	229* (26)	250* (28)	324* (37)	125* (14)	176* (20)	5/16
3/8	17 (23)	22 (30)	26 (35)	34 (46)	37 (50)	48 (65)	19 (26)	26 (35)	3/8
7/16	27 (37)	35 (47)	42 (57)	54 (73)	59 (80)	77 (104)	30 (41)	42 (57)	7/16
1/2	42 (57)	54 (73)	64 (87)	83 (113)	91 (123)	117 (159)	45 (61)	64 (88)	1/2
5/8	83 (112)	107 (145)	128 (174)	165 (224)	180 (244)	233 (316)	90 (122)	127 (172)	5/8
3/4	146 (198)	189 (256)	226 (306)	293 (397)	319 (432)	413 (560)	160 (217)	226 (306)	3/4
7/8	142 (193)	183 (248)	365 (495)	473 (641)	515 (698)	667 (904)	258 (350)	364 (494)	7/8
1	213 (289)	275 (373)	547 (742)	708 (960)	773 (1048)	1000 (1356)	386 (523)	545 (739)	1

NOTE: Torque values shown with \* are pound-inches.

#### IDENTIFICATION **CAP SCREWS AND CARRIAGE BOLTS**



SAE GRADE 2





**SAE GRADE 5** 





**SAE GRADE 8** 





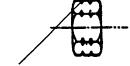


**SAE GRADE 5 HEX NUTS** 



**HEX NUTS** 

#### **LOCKNUTS**



**GRADE IDENTIFICATION:** 

**GRADE A - NO NOTCHES** 

**GRADE B - ONE CIRCUMFERENCIAL NOTCH** 

**GRADE C - TWO CIRCUMFERENCIAL NOTCHES** 

Marks need not be located at the corners



**GRADE IDENTIFICATION:** 

**GRADE A - NO MARKS** 

**GRADE B - THREE MARKS** 

**GRADE C - SIX MARKS** 

Marks need not be located at the corners



**GRADE A - NO MARK** 

**GRADE B - LETTER B** 

**GRADE C - LETTER C** 

**GRADE IDENTIFICATION** 

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