

ORIGINAL INSTRUCTIONS

OPERATOR'S MANUAL

T8.320

T8.350

T8.380

T8.410

T8.435

T8.380 SmartTrax™

T8.410 SmartTrax™

T8.435 SmartTrax™

Tractor

PIN ZGRE05001 and above

Part number 48047370

1st edition English

September 2016



Contents

NOTE: The Operator's Manual consists of two volumes. The first volume contains operating information, the second volume the maintenance and diagnostic information.

1 GENERAL INFORMATION

Note to the owner.....	1-1
Engine tampering.....	1-2
Tractor intended use.....	1-2
Electro-magnetic compatibility (EMC).....	1-3
ISOBUS certification.....	1-4
Product identification.....	1-5
Manual storage.....	1-8
Machine orientation.....	1-9
Component identification.....	1-10
Selective Catalytic Reduction (SCR) system.....	1-16

2 SAFETY INFORMATION

Safety rules and signal word definitions.....	2-1
Safety rules - General.....	2-2
Safety rules - General maintenance safety.....	2-4
Safety rules - Wheels and tires.....	2-4
Safety rules - Driving on public roads and general transportation safety.....	2-4
Safety rules - Fire and explosion prevention.....	2-5
Safety rules - General battery safety.....	2-5
Safety rules - Hydraulic system safety.....	2-6
Safety rules - Instructional seat safety.....	2-6
Safety rules - Operator presence system.....	2-7
Safety rules - Power Take-Off (PTO).....	2-7
Safety rules - Reflectors and warning lights.....	2-7
Safety rules - Seat belts.....	2-7
Safety rules - Roll Over Protective Structure (ROPS).....	2-8
Safety rules - Cab protection.....	2-9
Safety rules - Air conditioning system.....	2-9
Safety rules - Personal Protective Equipment (PPE).....	2-10
Safety rules - Do Not Operate tag.....	2-10
Safety rules - Hazardous chemicals.....	2-10
Safety rules - Utility safety.....	2-10
Safety rules - Electrical storm safety.....	2-11
Safety rules - Mounting and dismounting.....	2-11
Safety rules - Working at heights.....	2-11
Safety rules - Lifting and overhead loads.....	2-11
Safety rules - Implements, tools and trailers.....	2-12
Safety rules - Roll over and tip over.....	2-12
Proposition 65.....	2-13
Ecology and the environment.....	2-14
Safety signs.....	2-15
Selective Catalytic Reduction (SCR) exhaust treatment - Safety signs.....	2-25

Global warming potential	2-27
--------------------------------	------

3 CONTROLS AND INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Tractor access	3-1
Lower step	3-3

OPERATOR'S SEAT

Control identification	3-4
------------------------------	-----

INSTRUCTOR'S SEAT

Overview	3-8
----------------	-----

FORWARD CONTROLS

Steering column	3-9
Front console	3-12
Pedal controls	3-14

LEFT-HAND SIDE CONTROLS

Pneumatic trailer brake	3-16
-------------------------------	------

RIGHT-HAND SIDE CONTROLS

Armrest console	3-17
Multi function handle	3-19
Engine speed control	3-24
Control panel	3-27
Remote valve controls	3-34
Joystick	3-35
Rear hitch controls	3-37
Armrest compartment	3-39
Adjusting the armrest console	3-41

REARWARD CONTROLS

Fender console	3-42
Automatic temperature controls	3-45
Automatic temperature control system	3-48
Ventilation	3-49

OVERHEAD CONTROLS

Interior lamps	3-51
----------------------	------

EXTERIOR CONTROLS

Rear fender	3-52
Front hitch	3-54

INSTRUMENT CLUSTER

Overview	3-55
----------------	------

Gauges	3-56
Status and warning icons	3-57
Upper display	3-60
Lower display	3-64
Keypad	3-66
Setup menu	3-68
Rear tire radius and track radius charts	3-74
Adjust menu	3-75
Performance features	3-84

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT

Engine - Safety rules	4-1
-----------------------------	-----

STARTING THE UNIT

Normal engine starting	4-4
Cold starting aids	4-8
Cold temperature operation	4-10

STOPPING THE UNIT

Stopping the engine	4-12
---------------------------	------

MOVING THE UNIT

FULL POWERSHIFT TRANSMISSION	4-14
Powershift transmission	4-14
Best practices for prolonged transmission life	4-15
Inching pedal and throttle	4-16
Powershift transmission controls	4-17
Upper display - Powershift transmission	4-20
Driving the Powershift vehicle	4-22
Setting default gears	4-26
Ground Speed Management (GSM)	4-28
CONTINUOUSLY VARIABLE TRANSMISSION (CVT)	4-36
Introduction	4-36
Auto Command brake, pedal and throttle operation	4-37
Auto Command controls	4-43
Upper display	4-48
Auto Command operation	4-50
Eco-Draft or Shuttle mode	4-56
Driving the Auto Command transmission	4-59
Transmission messages	4-64
POWERSHIFT AND CVT TRANSMISSIONS	4-66
Selective Catalytic Reduction (SCR) system	4-66
Engine idling or full catalyst messages	4-76
Mechanical Front Drive (MFD)	4-77
Differential lock system	4-80
Suspended axle	4-82
Ride control	4-87

Engine power boost	4-89
Constant engine speed	4-90
Suspended cab	4-93
Headland management system	4-94

PARKING THE UNIT

Automatic park lock	4-100
---------------------------	-------

5 TRANSPORT OPERATIONS

ROAD TRANSPORT

Tractor warning lamps and Slow Moving Vehicle (SMV) symbol	5-1
Wide transport marker light	5-2
Tractor warning lamps	5-4
Safe transport speed	5-5
Implement warning lamps and Slow Moving Vehicle (SMV) symbol	5-6
Safety chain	5-7

SHIPPING TRANSPORT

Securing the tractor for shipping	5-8
---	-----

RECOVERY TRANSPORT

Safety rules	5-9
Towing the tractor	5-10

6 WORKING OPERATIONS

GENERAL INFORMATION

Overview	6-1
----------------	-----

REAR POWER TAKE-OFF (PTO)

Safety rules	6-2
Connecting the Power Take-Off (PTO)	6-5
Interchangeable Power Take-Off (PTO) shaft	6-6
Rear Power Take-Off (PTO) operation	6-12
Power Take-Off (PTO) fender switch operation	6-16
Auto Power Take-Off (PTO) operation	6-17

FRONT POWER TAKE-OFF (PTO)

Overview	6-20
Front Power Take-Off (PTO) operation	6-21

REAR HITCH

Identification	6-24
Link adjustment	6-25
Hitch high clearance adjustment	6-29
Hydraulic links	6-32

Sway limiter adjustment	6-34
Lower link block adjustment	6-35
Mechanical float adjustment	6-37
Hitch quick coupler - Category III/IIIN	6-38
Hitch quick coupler - Category IVN	6-43
Hitch operation	6-48
Hitch remote switch operation	6-53
Position control operation	6-54
Load control operation	6-56
Slip control operation	6-58
Hitch set point	6-60

FRONT HITCH

Overview	6-62
Front hitch operation	6-62

DRAWBARS AND TOWING ATTACHMENTS

Safety rules	6-69
Drawbar capacity/position	6-70
Adjusting the drawbar	6-74

TRAILER BRAKING SYSTEMS

Safety rules	6-76
Trailer brake connections	6-77
Air pressure monitoring	6-78

AUXILIARY CONNECTIONS

Auxiliary power and lighting	6-79
Cab power connections	6-81
Radar connection	6-82
Implement ISOBUS connector	6-83

HYDRAULIC REMOTE CONTROL VALVES

Valve couplers and connections	6-84
Motor return circuit	6-88
Power beyond circuit	6-89
Flow capacity	6-90
Hydraulic transport lock	6-91
Operating the controls	6-92
Remote valve display screens	6-96
Remote hydraulic auto mode	6-99
Auto depth control	6-102
Joystick operation	6-104

BALLASTING THE TRACTOR

Guidelines	6-108
Tire load and inflation charts	6-119

Weights, cast metal.....	6-133
Wheel slip and power hop performance	6-147

MECHANICAL FRONT DRIVE (MFD) AXLES

Front axle identification.....	6-150
Tire combinations and tread positions.....	6-151
Steering and oscillation stops	6-159
Tread and fender settings - Class 4.75 and 5.0 fixed front axles.....	6-161
Tread and fender settings - Class 4.75 and 5.0 saddle suspended front axles ..	6-169
Tread and fender settings - Class 5.0 wide front axles.....	6-176
Front wheel fenders	6-178
Front wheel fenders - Class 4.75 and 5.0 fixed and suspended axles	6-179
Front wheel fenders - Class 5.0 wide fixed and suspended axles	6-184
Wide tire fender kit	6-189

REAR AXLE

Rear wheel installation	6-195
Rear wheel tread settings	6-199
Dual/triple wheel setup for 508 mm (20 in)/559 mm (22 in) row spacing.....	6-207
Adjustable rear wheel	6-214

REAR TRACKS

Tire load and inflation charts - - Tractors with rear tracks	6-216
Maximum front ballast recommendations	6-218
Front wheel tread settings.....	6-219
Track preconditioning.....	6-224
Factory and field track settings	6-226

7 MAINTENANCE

GENERAL INFORMATION

Safety rules.....	7-1
Dealer service and parts	7-2
Maintenance guidelines	7-2
Opening the hood	7-3
Closing the hood	7-5
Filling the fuel tank	7-6
Filling the Diesel Exhaust Fluid (DEF)/AdBlue® tank	7-8
Battery disconnect switch	7-10
Battery access and service.....	7-11
Tire and rim service.....	7-12
Tractor jacking points.....	7-14
Capacities	7-16
Consumables - Engine oil	7-17
Consumables - Transmission/hydraulic system fluid	7-18
Consumables - Diesel fuel	7-19
Consumables - Biodiesel fuels	7-20
Consumables - Diesel Exhaust Fluid (DEF)/AdBlue®	7-22
Consumables - Organic Acid Technology (OAT) coolant	7-24

Maintenance chart notes	7-26
Maintenance summary decal	7-27

Maintenance planning

Maintenance chart	7-28
-------------------------	------

At warning message display

Air filter service icon/message*	7-30
Water in fuel message	7-33
Transmission oil filter switch	7-35
Hydraulic oil filter switch	7-38

First 10 to 50 hours

Wheel bolt torque	7-41
Weight bolt torque	7-42
Differential and planetary oil	7-43

Every 10 hours or daily

Engine oil level	7-44
Transmission oil level	7-45
Engine coolant level	7-46
Air reservoir	7-46
Rear hitch and front axle	7-46

Every 50 hours or weekly

Engine auxiliary fuel filter	7-47
------------------------------------	------

First 100 hours

Powershift transmission clutch calibration	7-49
--	------

Every 100 hours

Front hitch	7-55
Front Power Take-Off (PTO) drive shaft	7-57

Every 200 hours

Track alignment	7-58
-----------------------	------

Every 300 hours

Battery water level (Note B)	7-59
Engine air intake and exhaust hoses	7-61
Engine coolant level - deaeration tank	7-63
Weight bolt torque	7-64
Front axle (Note A)	7-65
Rear hitch (Note A)	7-67
Fuel tank	7-69

Differential and planetary oil level (Note B).....	7-70
Transmission oil pressure	7-71
Front Power Take-Off (PTO) oil level	7-72

Every 400 hours

Cab air filter*.....	7-73
----------------------	------

Every 600 hours

Engine oil and filter*	7-76
Engine coolant antifreeze protection	7-79
Engine coolant hoses and clamps.....	7-79
Engine fuel filter*	7-81
Engine auxiliary fuel filter*	7-84
Fuel system bleeding	7-86
Changeable Power Take-Off (PTO) internal splines.....	7-87
Diesel Exhaust Fluid (DEF)/AdBlue® in-line filter	7-88
Engine air precleaner*	7-89

Every 1000 hours or annually

Pneumatic brake system dryer	7-90
Powershift transmission clutch calibration.....	7-91
Front Power Take-Off (PTO) oil and filter*.....	7-97
Front Power Take-Off (PTO) dropbox oil	7-99

Every 1200 hours or annually

Differential and planetary oil.....	7-100
Engine air filters*	7-104

Every 1500 hours

Transmission oil	7-107
Regulated system oil filter*	7-110
Main transmission oil filter*	7-111
Idler/roller wheel oil	7-112
Engine crankcase filter*	7-113

Every 3000 hours

Engine valve adjustment (Note C).....	7-117
---------------------------------------	-------

Every 3600 hours

Diesel Exhaust Fluid (DEF)/AdBlue® supply module filter	7-118
---	-------

Every 4000 hours or every four years

Engine coolant.....	7-121
---------------------	-------

As required

Vehicle fire prevention	7-123
Track inspection and bolt torque	7-124
Track rotation	7-124
Track drive wheel and idler bolt torque	7-124
Track tension release.....	7-125
Track alignment.....	7-127
Cab air filter*	7-129
Grille screen and radiator area	7-132
Fuel tank vent filter	7-133
Transmission clutch and accumulator	7-133
Tire pressure	7-134
Fan belt	7-135
Diesel Exhaust Fluid (DEF)/AdBlue® tank	7-141
Remote valve collection bottle.....	7-143
Remote valve couplers	7-144
Cab fabric and carpet.....	7-145
Seat belt	7-145

Fuse and relay locations

Electrical component location	7-146
Lamps and bulbs	7-151

STORAGE

Preparing for storage	7-152
Removal from storage	7-153

ELECTRICAL SYSTEM

Radio or audio system.....	7-154
Battery removal and installation	7-155
Auxiliary battery connections	7-157
Headlight	7-158
LED work lights.....	7-159
Grille work light	7-159
Fender tail light and warning light	7-160
Roof warning light	7-161
Roof work light.....	7-161
High intensity work light	7-162
Wide transport marker light.....	7-163
Rotating beacon light	7-164
Interior light	7-165

8 TROUBLESHOOTING

ALARM(S)

Display warnings overview	8-1
Display warnings - Level 1	8-2
Display warnings - Level 2	8-4
Display warnings - Level 3	8-7
Display warnings - Level 4	8-9

SYMPTOM(S)

Engine symptoms	8-11
Transmission symptoms.....	8-13
Hydraulic symptoms.....	8-14
Hitch symptoms	8-15
Brake symptoms.....	8-16
Cab environment symptoms.....	8-16
Electrical power system symptoms.....	8-17

9 SPECIFICATIONS

Engine specifications	9-1
Power train specifications	9-2
Operating speeds - Wheeled tractors	9-6
Operating speeds - SmartTrax™ tractors	9-7
Vehicle dimensions and shipping weight - Wheeled tractors.....	9-11
Vehicle dimensions and shipping weight - SmartTrax™ tractors	9-17
Maximum operating weight.....	9-20

10 ACCESSORIES

Farming system displays	10-1
Rear view mirrors.....	10-2
Chemical tank mounting	10-4
Loader connection and operation	10-6
General accessories.....	10-7

11 FORMS AND DECLARATIONS

Delivery report - owner copy	11-1
Delivery report - dealer copy	11-2
First service - owner copy	11-4
First service - owner copy	11-6

1 - GENERAL INFORMATION

Note to the owner

This manual contains important information about the safe operation, adjustment and routine maintenance of your T8. or T8. **SmartTrax™** series tractor. The manual is divided into 10 chapters as outlined in the table of contents. Refer to the index at the end of this manual for locating specific items about your tractor.

Do NOT operate or permit anyone to operate or service this machine until you or the other persons have read this manual. Use only trained operators who have demonstrated the ability to operate and service this machine correctly and safely.

This Operator's Manual is to be stored in the manual compartment behind the operator's seat in the vehicle. Make

sure this manual is in good condition. Contact your dealer to obtain additional manuals.

Your NEW HOLLAND dealer will instruct you in the general operation of your new equipment. Your dealer's staff of factory-trained service technicians will be glad to answer any questions that may arise regarding the operation of your machine. They will also provide any after-sales service you may need, and genuine NEW HOLLAND parts, your guarantee of quality and match.

NEW HOLLAND **Top Service™** is also available. Call 1-866-NEWHLND (1-866-639-4563) or email na.topservice@cnh.com.

Tractors equipped with rear tracks

On **SmartTrax™** models, refer to the information starting on page **Operating speeds - SmartTrax™ tractors** for transport speed weight limitations.

See Operator's Manual for Transport Speed Weight Guidelines

Speed (kph/mpg)	Weight (Kg/lbs)
10	1000
15	1500
20	2000
25	2500
30	3000
35	3500
40	4000
45	4500
50	5000
55	5500
60	6000
65	6500
70	7000
75	7500
80	8000
85	8500
90	9000
95	9500
100	10000

ccda 00000000A

RAIL14TR03870BA 1

Engine tampering

The fuel system, exhaust after-treatment system, and engine on your machine are designed and built to government emissions standards. Tampering by dealers, customers, operators, and users is strictly prohibited by law.

Failure to comply could result in government fines, rework charges, invalid warranty, legal action, and possible confiscation of the machine until rework to original condition is completed. Engine service and/or repairs must be done by a certified technician only!

Tractor intended use

T8. or T8. **SmartTrax™** series tractors, with standard equipment and authorized attachments, are intended to be used for customary farming, land leveling and related agriculture operations (intended use). Installation of utility (dozer) blades, tile plows, or push bars on the tractor is not recommended. Any tractor damage resulting from the installation and/or use of such equipment is not covered by the tractor warranty.

Consult an authorized dealer or CNH Industrial America LLC on changes, additions or modifications that can be required for this machine to comply with various regulations and safety requirements. Unauthorized modifications will cause serious injury or death. Anyone making such unauthorized modifications is responsible for the consequences.

The tractor is not designed for light/heavy forestry applications; usage is prohibited for forestry applications.

Do not use this machine for any purpose or in any manner other than as described in the manual, decals, or other product safety information provided with the machine. These materials define the machine's intended use.

Use in any other way is considered as contrary to the intended use. The manufacture accepts no liability for any damage or injury resulting from this misuse and these risks must be born solely by the user.

Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com