

ORIGINAL INSTRUCTIONS

# OPERATOR'S MANUAL

---

**T6.145**

**T6.155**

**T6.165**

**T6.175**

**T6.180**

**AutoCommand™**

Tractor - Tier 4B(final)

*PIN HACT61\*\*\*KEG01001 and above*

**Part number 51550689**

3<sup>rd</sup> edition English

February 2019

*Replaces part number 51517935*



# Contents

---

## 1 GENERAL INFORMATION

Metric and imperial units abbreviations.....	1-1
To the owner.....	1-3
Electro-magnetic interference (EMC).....	1-5
Product identification .....	1-6
Engine identification .....	1-7
Drive line identification .....	1-8
Transmission identification .....	1-8
Cab identification .....	1-9
Product identification plate .....	1-10
Ecology and the environment .....	1-11
Programming tractor functions .....	1-12
Operator's manual storage .....	1-13
Before operating the tractor .....	1-14
International symbols .....	1-15
Machine stability.....	1-16
Selective Catalytic Reduction (SCR) system.....	1-20

## 2 SAFETY INFORMATION

Safety precautions.....	2-1
Safety decals .....	2-3
Safety rules .....	2-12
Burn prevention.....	2-19
Prevention of fire or explosions.....	2-20
Fire extinguisher.....	2-21
Protection offered by the tractor.....	2-22
Hazardous substances .....	2-25
Emergency exit .....	2-26
Wheel chocks.....	2-27
Intended use statement .....	2-28
Instructor's seat.....	2-30

## 3 CONTROLS AND INSTRUMENTS

### ACCESS TO OPERATOR'S PLATFORM

Introduction .....	3-1
Cab air filters .....	3-5
In cab storage (where fitted).....	3-7
Cable and wiring routing.....	3-8
Mobile telephone usage .....	3-8
Implement monitor installation.....	3-9

### OPERATOR'S SEAT

Operator's seat .....	3-10
Air suspension seat deluxe.....	3-11
Air suspension seat with passive or Dynamic Damping System (DDS).....	3-16

---

Air suspension seat 'evolution active' .....	3-22
Seat belt .....	3-29

## INSTRUCTOR'S SEAT

Instructional seat .....	3-30
--------------------------	------

## FORWARD CONTROLS

Ignition key .....	3-31
Hazard light switch .....	3-31
Lights and turn indicator lever .....	3-32
Follow me home lights .....	3-32
Windshield wiper and washer controls .....	3-33
Electronic parking brake .....	3-34
Clutch pedal .....	3-38
Foot brakes .....	3-39
Steering column .....	3-42

## LEFT-HAND SIDE CONTROLS

Hand brake .....	3-43
------------------	------

## RIGHT-HAND SIDE CONTROLS

Integrated control panel .....	3-44
Multifunction Handle .....	3-45

## REARWARD CONTROLS

Switches on C-pillar .....	3-46
Battery isolator control switch .....	3-48
Heated screens (where fitted) .....	3-49
ISO bus functionality .....	3-50
Hydraulic master switch .....	3-51
Switches on right-hand trim .....	3-52
Advanced Steering Control activation switch .....	3-53
Variable Ratio Steering (VRS) .....	3-54
Autoguidance system .....	3-57
Autoguidance - Variable ratio steering .....	3-58
Climate controls (Low-profile cab) .....	3-59
Manual temperature control (Low-profile cab) .....	3-61

## OVERHEAD CONTROLS

Switch panel .....	3-62
Left-hand and right-hand outermost work light switch .....	3-63
Interior light .....	3-64
Climate controls .....	3-65
Manual temperature control .....	3-66
Automatic Temperature Control (ATC) .....	3-67

---

## INSTRUMENT CLUSTER

Analog Digital Instrument Cluster (ADIC) .....	3-68
Gauges .....	3-69
Indicator and warning lights .....	3-70
Displays .....	3-72
Keypad enhanced .....	3-75
Selecting or changing the display settings .....	3-77
Ground speed calibration.....	3-78
Performance monitor .....	3-81
Armrest color display .....	3-86
Pop-up screens on color display .....	3-87
Performance monitor on color display.....	3-92
Programming the displays.....	3-97
Alarm functions .....	3-100
Accessing stored fault codes .....	3-102
Selective Catalytic Reduction (SCR) exhaust treatment - Overview .....	3-103
Warning and advisory symbols .....	3-112

## 4 OPERATING INSTRUCTIONS

### COMMISSIONING THE UNIT

Refueling the tractor .....	4-1
-----------------------------	-----

### STARTING THE UNIT

Starting the engine .....	4-3
Grid heater cold start aid (where fitted).....	4-5
Fuel heater (where fitted).....	4-5
Coolant immersion heater (where fitted) .....	4-6
Transmission oil heater (where fitted) .....	4-7
Boosting the battery .....	4-8

### STOPPING THE UNIT

Stopping the engine .....	4-9
Automatic engine shutdown .....	4-10

### MOVING THE UNIT

Operating in cold temperatures.....	4-11
Low idle speed management.....	4-13

## 5 TRANSPORT OPERATIONS

### PREPARING FOR ROAD TRANSPORT

Carrying the tractor on a transporter .....	5-1
Secure the high visibility roof panel .....	5-1

### RECOVERY TRANSPORT

Freeing a stuck tractor.....	5-2
------------------------------	-----

---

Towing the tractor.....	5-3
-------------------------	-----

## 6 WORKING OPERATIONS

### GENERAL INFORMATION

Variable engine power management .....	6-1
Constant engine speed .....	6-3
Differential lock .....	6-6
Four wheel drive .....	6-8
Front axle suspension (where fitted) .....	6-10
HTS standard.....	6-11
Quick guide .....	6-11
Explanation of symbols .....	6-13
Recording and replaying .....	6-15
Recording a sequence .....	6-17
Replaying a sequence .....	6-19
HTS advanced.....	6-23
Headland turn sequence .....	6-23
Universal symbols .....	6-24
Recording a sequence .....	6-27
Creating a sequence in standstill .....	6-32
Replaying a sequence .....	6-34
Saving a sequence .....	6-38
Edit a sequence .....	6-41
Recalling a sequence.....	6-44
Deleting a sequence .....	6-48
Headland turn sequence error codes.....	6-49
HTS advanced with Automatic End Of Row Turn functionality .....	6-52
Automatic End Of Row Turn functionality .....	6-52
Implement setup .....	6-54
Creating field boundaries and headlands .....	6-55
Recording a sequence .....	6-59
Replaying a sequence .....	6-63

### TRANSMISSION

Transmission operation.....	6-67
Drive pedal .....	6-67
Engine speed control .....	6-68
Shuttle lever .....	6-70
Speed matching .....	6-71
Transmission controls .....	6-72
Program the maximum speed .....	6-75
Stationary control .....	6-77
Anti jack knife.....	6-78
Manual mode .....	6-80
Automatic mode .....	6-81
Cruise mode .....	6-83
Power Take-Off (PTO) mode .....	6-85
Pneumatic Trailer Brake Stabilization System .....	6-86
Fault codes .....	6-88

---

## REAR POWER TAKE-OFF

Power Take-Off (PTO) operating precautions .....	6-89
Changing the PTO output shaft .....	6-90
Attaching PTO driven equipment .....	6-91
Power Take-Off (PTO) operation .....	6-92
Three speed PTO systems .....	6-97
Ground drive PTO (where fitted) .....	6-99
External PTO controls .....	6-100
Auto PTO operation .....	6-102

## FRONT POWER TAKE OFF

Power Take-Off (PTO) operation .....	6-105
Auto PTO operation .....	6-108

## REAR HITCH

Electronic Draft Control (EDC) .....	6-110
Settings and display .....	6-114
Electronic Draft Control (EDC) operation .....	6-116
External hitch controls .....	6-121

## FRONT HITCH

Settings and adjustments .....	6-123
Hitch operation .....	6-126
External hitch controls .....	6-131
Front hitch management .....	6-132
Auxiliary front couplers (where fitted) .....	6-137
External controls for front couplers .....	6-139

## HYDRAULIC REMOTE CONTROL VALVES

Remote control valves .....	6-140
Connecting remote cylinders .....	6-143
Operating with remote valves .....	6-145
Hydraulic oil level when using remote hydraulic equipment .....	6-148

## ELECTRO-HYDRAULIC REMOTE CONTROL VALVES (where fitted)

Remote control valves .....	6-150
Settings and adjustments .....	6-158
Setting the remote valve priority .....	6-164
Creating timer programs .....	6-165
Connecting remote cylinders .....	6-172
Operating with remote valves .....	6-175
Joystick operation with a front loader .....	6-177
Mid mount remote valves .....	6-182
EHR implement control setting .....	6-183
External EHR controls .....	6-187
Hydraulic oil level when using remote hydraulic equipment .....	6-188

---

## HYDRAULIC POWER BEYOND PORT

Hydraulic power beyond for external services .....	6-190
--	-------

## THREE POINT HITCH

Attaching three-point hitch equipment .....	6-193
Lift rod adjustment .....	6-195
Top link adjustment .....	6-198
Flexible link end adjustment .....	6-200
Quick hitch .....	6-201
Linkage stabilizer adjustment .....	6-203

## DRAWBARS AND TOWING ATTACHMENTS

Drawbars and towing attachments .....	6-205
Swinging drawbar .....	6-209
Automatic pickup hitch .....	6-212
Rear trailer hitches .....	6-216

## TRAILER BRAKING SYSTEMS

Trailer brake release switch .....	6-225
Air-operated trailer brakes (Universal type) .....	6-226
Air-operated trailer brakes (UK type) .....	6-230
Air-operated trailer brakes (Italian type) .....	6-231
Auxiliary air supply connector (where fitted) .....	6-232
Hydraulic trailer brakes (Universal type - Dual line) .....	6-233
Hydraulic trailer brakes (Universal type - Single line) .....	6-236
Hydraulic trailer brakes (Italian type) .....	6-237

## WHEEL TRACK ADJUSTMENT

Front wheel track adjustment .....	6-238
Front wheel alignment .....	6-242
Steering stops .....	6-243
Front axle oscillation stops .....	6-243
Front fender .....	6-244
REAR WHEEL TRACK ADJUSTMENT .....	6-246
Flange type axle (where fitted) .....	6-246
Bar type axle (where fitted) .....	6-250
Dual rear wheels (where fitted) .....	6-255

## BALLASTING AND TIRES

Ballasting and tires .....	6-258
Iron weights (where fitted) .....	6-261
Liquid ballast .....	6-264
Tire inflation .....	6-266
Tire pressures and permissible loads .....	6-267

---

## AUXILIARY POWER CONNECTIONS

Diagnostic socket.....	6-269
Trailer socket electrical.....	6-270
<b>ELECTRICAL POWER CONNECTORS</b> .....	<b>6-271</b>
Internal power connectors.....	6-271
External power connectors.....	6-273
ISO bus classes.....	6-275
ISO bus functionality.....	6-277
Reconfigurable inputs for ISO Bus function.....	6-286

## 7 MAINTENANCE

### GENERAL INFORMATION

Introduction.....	7-1
Fuel requirement - Diesel fuel.....	7-2
Fuel - Storage, handling and transport.....	7-2
Biodiesel fuel.....	7-3
Change the engine oil.....	7-5
Protective devices.....	7-6
Tractor jacking points.....	7-8
Engine oils.....	7-9
General specifications.....	7-10
Capacities.....	7-11
Organic Acid Technology (OAT) coolant.....	7-12

### MAINTENANCE CHART

Maintenance chart.....	7-13
------------------------	------

### WHEN THE WARNING LIGHT IS ON

Change the engine air cleaner outer element.....	7-15
Drain the fuel system water separator.....	7-16
Check the brake fluid level.....	7-17

### EVERY 10 HOURS OR EACH DAY

Check the engine coolant level.....	7-18
Check the engine oil level.....	7-19
Check the remote control valve drain bottles.....	7-19
Check windscreen washer reservoir.....	7-20
Drain air reservoir on air operated trailer brake.....	7-20

### FIRST 50 HOURS

Service operations.....	7-21
-------------------------	------

### EVERY 50 HOURS

Clean the cab air filter.....	7-22
Clean the cooler section.....	7-24
All grease fittings.....	7-25
Check the front and the rear wheel nuts.....	7-32
Check the tire pressures and the tire condition.....	7-32

---



## EVERY 100 HOURS

Inspect the poly V-belt .....	7-33
Inspect the compressor drive belt .....	7-33

## EVERY 300 HOURS

Check the battery fluid level .....	7-35
Adjust the hand brake .....	7-36
Check the transmission oil level, the rear axle oil level and the hydraulic oil level ....	7-37
Check the 4WD front axle differential oil level and the hubs oil level.....	7-38
Check the front PTO gearbox oil level.....	7-38

## EVERY 600 HOURS

Change engine oil and filter .....	7-39
Change the pre-fuel filter and the secondary fuel filter .....	7-41
Change the engine air cleaner outer element .....	7-43
Change the hydraulic charge pump oil filter and the transmission oil filter .....	7-44
Check the engine air intake connections .....	7-45
Check the transmission oil cooler pipe couplings .....	7-46
Clean the DEF/AdBlue in-line filter .....	7-46

## EVERY 1200 HOURS OR ANNUALLY

Change the cab air filters .....	7-47
Change the hydraulic suction pump oil filter.....	7-48
Change the 4WD differential oil .....	7-49
Change the 4WD planetary hub oil.....	7-50
Change the front PTO gearbox oil.....	7-50
Grease the rear axle shaft bearing .....	7-51

## EVERY 1200 HOURS OR EVERY 2 YEARS

Change the engine air cleaner inner element .....	7-52
Check the valve tappet clearance .....	7-53
Change the DEF/AdBlue in-line filter .....	7-53
Change the air brake drier reservoir.....	7-54
Change the poly V-belts .....	7-55
Change the transmission oil, the rear axle oil and the hydraulic oil .....	7-57

## EVERY 2 YEARS

Change the air conditioning receiver drier.....	7-58
---	------

## EVERY 1800 HOURS OR EVERY 2 YEARS

Change the engine breather filter .....	7-59
---	------

## EVERY 3600 HOURS OR EVERY 2 YEARS

Change the DEF/AdBlue main filter .....	7-60
---	------

---

## EVERY 3600 HOURS OR EVERY 4 YEARS

Change the engine coolant fluid .....	7-61
---------------------------------------	------

## GENERAL MAINTENANCE

Cleaning the tractor .....	7-65
Check first stage fuel filter and water trap .....	7-67
Bleeding the fuel system .....	7-68
Hydraulic system hoses .....	7-69
Check the brake pedal latching/unlatching .....	7-69
Adjust the automatic pickup hitch .....	7-70
Headlight adjustment .....	7-71
Work light adjustment .....	7-72
Bulb replacement .....	7-73
Fuses and relays .....	7-76
Protecting the electronic and electrical systems during battery charging or welding ..	7-86
Battery removal and installation .....	7-87

## STORAGE

Tractor storage .....	7-89
Preparation for use after storage .....	7-89

## 8 TROUBLESHOOTING

### FAULT CODE RESOLUTION

Introduction .....	8-1
--------------------	-----

### ALARM(S)

Fault codes and symbols .....	8-2
-------------------------------	-----

### SYMPTOM(S)

Engine .....	8-4
Transmission .....	8-5
Hydraulics .....	8-5
Three-point hitch .....	8-6
Brakes .....	8-6
Cab .....	8-6
Electrical system .....	8-7

## 9 SPECIFICATIONS

General dimensions .....	9-1
Minimum turn radius .....	9-3
Axle dimension .....	9-4
Maximum operating angle .....	9-5
Maximum tractor operating weights .....	9-5
Tractor weights .....	9-6
Capacities .....	9-6
Engine .....	9-7

---

Fuel system.....	9-7
Air cleaner system.....	9-8
Cooling system.....	9-8
Transmission.....	9-8
Rear Power Take-Off (PTO).....	9-9
Front Power Take-Off (PTO).....	9-9
Three-point hitch.....	9-10
Three-point hitch front.....	9-11
Hydraulic system.....	9-11
Remote control valves.....	9-11
Front remote control valve couplers.....	9-11
Brakes.....	9-12
Steering.....	9-13
Electrical equipment.....	9-14
Minimum hardware tightening torques.....	9-15

## 10 ACCESSORIES

Radio (where fitted).....	10-1
External rear view mirrors.....	10-2
Border marker plates (where fitted).....	10-4
Auxiliary head lights and signature lights.....	10-5
Rotating beacon.....	10-6
Front-end loader fixation points.....	10-7

## 11 FORMS AND DECLARATIONS

Service record 1st 50 hour, Owner copy.....	11-1
Service record 1st 50 hour, Dealer copy.....	11-3
Telematics module declaration of conformity.....	11-4

---

# 1 - GENERAL INFORMATION

## Metric and imperial units abbreviations

Typical applications	Metric unit		Imperial unit	
	Name	Symbol	Name	Symbol
Area (Land area)				
	hectare	ha	acre	ac
	square meter	m <sup>2</sup>	square foot	ft <sup>2</sup>
	square millimeter	mm <sup>2</sup>	square inch	in <sup>2</sup>
			square inch	in <sup>2</sup>
Electricity				
	ampere	A	ampere	A
	volt	V	volt	V
	microfarad	μF	microfarad	μF
	ohm	Ω	ohm	Ω
Force				
	kilonewton	kN	pound	lb
	newton	N	pound	lb
Force per length				
	newton per meter	N/m	pound per foot	lb/ft
			pound per inch	lb/in
Frequency				
	megahertz	MHz	megahertz	MHz
	kilohertz	kHz	kilohertz	kHz
	hertz	Hz	hertz	Hz
Frequency - Rotational				
	revolution per minute	r/min	revolution per minute	r/min <sup>a</sup>
		rpm		rpm
Length				
	kilometer	km	mile	mi
	meter	m	foot	ft
	centimeter	cm	inch	in
	millimeter	mm	inch	in
	micrometer	μm		
Mass				
	kilogram	kg	pound	lb
	gram	g	ounce	oz
	milligram	mg		
Mass per mass				
	milligram per kilogram	mg/ kg	parts per million	ppm
Power				
	kilowatt	kW	horsepower	Hp
	watt	W	Btu per hour	Btu/hr
			Btu per minute	Btu/min
Pressure or stress (Force per area)				
	kilopascal	kPa	pound per square inch	psi
			inch of mercury	inHg
	pascal	Pa	inch of water	inH <sub>2</sub> O
	megapascal	MPa	pound per square inch	psi
	millibar	mbar		
	bar	bar		

1 - GENERAL INFORMATION

Typical applications	Metric unit		Imperial unit	
	Name	Symbol	Name	Symbol
Temperature (other than thermodynamic)				
	degrees Celsius	°C	degrees Fahrenheit	°F
Time				
	hour	h	hour	h
	minute	min	minute	min
	second	s	second	s
Torque (includes bending moment, moment of force, and moment of a couple)				
	newton meter	N m	pound foot	lb ft
			pound foot	lb in
Velocity				
	kilometer per hour	km/h	mile per hour	mph
	meter per second	m/s	foot per second	ft/s
	millimeter per second	mm/s	inch per second	in/s
	meter per minute	m/min	foot per minute	ft/min
Volume (includes capacity)				
	cubic meter	m <sup>3</sup>	cubic yard	yd <sup>3</sup>
				cu yd
	liter	l	cubic inch	in <sup>3</sup>
	liter	l	US gallon	US gal
			UK gallon	UK gal
			US quart	US qt
			UK quart	UK qt
	milliliter	ml	fluid ounce	fl oz
Volume per time (includes discharge and flow rate)				
	cubic meter per minute	m <sup>3</sup> /min	cubic foot per minute	ft <sup>3</sup> /min
	liter per minute	l/min	US gallon per minute	US gal/min
	milliliter per minute	ml/min	UK gallon per minute	UK gal/min
Sound power level and sound pressure level				
	decibel	dB	decibel	dB
Water hardness				
	German hardness	°dH	English hardness	°e
	French hardness	°fH	parts per million	ppm

**Glossary**

Acronym	Definition
DEF	Diesel Exhaust Fluid
ISO	International Organization for Standardization
MSDS	Material Safety Data Sheet
NOx	Nitrogen Oxide
PPE	Personal Protective Equipment
SCR	Selective Catalytic Reduction
ULSD	Ultra Low Sulfur Diesel
%	Percent
<	Less than
>	Greater than

## To the owner

### General information

This manual has been prepared according to ISO 3600:1996 to assist you in the correct procedure for running-in, driving and operating and for the maintenance of your new tractor. Read this manual carefully. Your tractor is intended for use in normal and customary agricultural applications.

If at any time you require advice concerning your tractor, do not hesitate to contact your authorized dealer. He has factory trained personnel, genuine manufacturers' parts and the necessary equipment to carry out all your service requirements.

The specifications are provided for your information and guidance. For further information concerning your tractor and equipment, consult your authorized dealer.

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 authorized dealer.

Your tractor has been designed and built to give maximum performance, economy and ease of operation under a wide variety of operating conditions. Your tractor fulfills all requirements as specified in the Regulation (EU) No 167/2013 of the European Parliament and of the Council. Prior to delivery, the tractor was carefully inspected, both at the factory and by your dealer to ensure that it reaches you in optimum condition. To maintain this condition and ensure trouble-free operation, it is important that the routine services, as specified on page 7-13 of this manual, are carried out at the recommended intervals.

All persons training to operate, or who will operate this tractor should be old enough to possess a valid local vehicle operating permit (or meet other applicable local age requirements). These persons must demonstrate the ability to operate and service the tractor in correct and safe manner.

### About this manual

This manual gives information for use of your machine, as intended and under the conditions foreseen by the manufacturer during normal operation and routine service and maintenance.

Read and understand; keep it in good condition and always safely store it in the provided pocket in the back of your seat for later easy retrieval.

This manual does not contain all the information related to periodical service, converting and repairs to be carried out by professional service personnel.

The table of contents page(s) are provided to have an overview of main manual's topics. A detailed alphabetic index is available at the end of this manual for locating specific items.

### Normal operation

- Normal operation means the use of the tractor for the purpose intended by the manufacturer by an operator familiar with the tractor and the mounted or towed equipment and complying with the information for operation and safe practices, as specified by the manufacturer in this manual and by the decals on the tractor and the equipment.
- Normal operation includes the preparation and storage of the tractor, swinging components into work position and vice versa, adding or removing ballast and picking up and setting off attachments.
- Normal operation includes the adjustment and setting of the tractor and equipment, for the specific condition of the field and/or the crop.

### Routine service

- Routine service and maintenance means activities that must be done daily by an operator familiar with the tractor characteristics and complying with the information for routine service and safe practices, as specified by the manufacturer in this manual and by decals on the tractor, in order to maintain its proper function. Routine service includes activities such as fueling, cleaning, washing, topping up fluid levels, greasing, replacing of consumable articles such as lamp bulbs.

### Converting, periodical service and repair

- Periodical service means activities that must be done at defined intervals by trained personnel familiar with the tractor characteristics and which are complying with the information for periodical service and safe practices, as partly specified by the manufacturer in this manual and in other Company literature, in order to maintain the expected life time of the tractor.
- Converting means activities that must be done by professional service personnel familiar with the tractor characteristics and complying with the information for converting, as partly specified by the manufacturer in this manual, in assembly instructions or in other Company literature, in order to fit the tractor to a specific configuration.
- Repair means activities that must be done by professional service personnel only familiar with the tractor characteristics and complying with the information for repair, as specified by the manufacturer in the dealer's workshop manual, in order to restore the proper function of the tractor after a failure or degradation of performance.

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](mailto:ebooklibonline@outlook.com)