ORIGINAL INSTRUCTIONS

PUMA 170 CVT
PUMA 185 CVT
PUMA 200 CVT
PUMA 215 CVT
PUMA 230 CVT

Efficient Power - Tractor

OPERATOR'S MANUAL

Part number 47894401

6th edition English July 2015 Replaces part number 47788549



Contents

1 GENERAL INFORMATION Metric and imperial units abbreviations	1 1
To the owner	
Product identification	
Engine identification	
Drive line identification	
Cab identification	
Ecology and the environment	1-8
Programming tractor functions	1-9
Operator's manual storage	
Before operating the tractor	1-10
International symbols	1-11
Machine stability	1-12
Selective catalytic reduction (SCR) system	1-16
2 SAFETY INFORMATION	
Safety precautions	2-1
Safety decals	
Safety rules	
Burn prevention	
Prevention of fire or explosions	
Fire extinguisher	
Protection offered by the tractor	
Hazardous substances	
Emergency exit	
Wheel chocks	
Intended use statement	
Instructor's seat	2-29
3 CONTROLS AND INSTRUMENTS	
ACCESS TO OPERATOR'S PLATFORM	0.4
Introduction	
Cab air filters	
In cab storage (where fitted)	
Cable and wiring routing	
Mobile telephone	
Implement monitor installation	
Cab air pressurisation control (where fitted)	
OPERATOR'S SEAT	
Air suspension seat	3_13
Air suspension seat deluxe	
Armrest control	
Seat belt	

INSTRUCTOR'S SEAT Instructional seat	3-21
FORWARD CONTROLS	
Ignition key	
Hazard light switch	
Lights and turn indicator lever	
Follow me home lights	
Windshield wiper and washer controls Electronic parking brake	
Anti-lock braking system ABS Operation	
Foot brakes	
Exhaust brake (where fitted)	
Steering column	
LEFT-HAND SIDE CONTROLS	
Handbrake	3-40
RIGHT-HAND SIDE CONTROLS Integrated control panel	3_41
integrated control pariet	
REARWARD CONTROLS Switches on (C) pillar	2 42
Hydraulic master switch	
Heated screens (where fitted)	
Fast steering system (where fitted)	
Battery isolator switch (where fitted)	
Climate controls	3-48
Manual temperature control	
Automatic temperature control	3-51
OVERHEAD CONTROLS	
Switch panel work lights	
Interior light	3-54
INSTRUMENT CLUSTER	
Integrated control unit	3-55
Gauges	
Indicator and warning lights	
Displays	
Keypad basic	
Keypad enhanced	
Selecting or changing the display settings	
Adjust menu Configure menu	
Performance monitor	

	Armrest color display	
	Pop-up screens on color display	
	Performance monitor on color display	
	Programming the displays	
	Alarm functions	3-89 3-91
	Warning and advisory symbols	
	Warning and advisory symbols	
	Training and advicery cymbole	100
4	ODED ATIMO INICTOLICATIONIC	
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)	4-5
	Transmission oil heater (where fitted)	4-7
	Boosting the battery	4-8
	STOPPING THE UNIT	
	Stopping the engine	4-9
	Automatic engine shut down	
	Automatic engine shut down with enhanced keypad (where fitted)	4-10
	MOVING THE UNIT	
	Operating in cold temperatures	4-11
	Reversible engine fan	
_	TDANCEOUT OPERATIONS	
S	TRANSPORT OPERATIONS	
	PREPARING FOR ROAD TRANSPORT	
	Tractor transporting	5-1
	Secure the high visibility roof panel	5-1
	RECOVERY TRANSPORT	
	Freeing a stuck tractor	5-1
	Towing the tractor	
6	WORKING OPERATIONS	
U		
	GENERAL INFORMATION	0 1
	Variable engine power management	
	Constant engine speed	
	Differential lock	0-6

Four wheel driveFront axle suspension (where fitted)	
Automated headland functions	
Quick guide	6-12
Explanation of symbols	6-14
Recording and replaying	6-15
Recording a sequence	6-18
Replaying a sequence	6-20
Headland function and color display screen	6-24
Deleting a sequence with color display	6-27
TRANSMISSION	
CVT transmission operation	6-28
Transmission operation	
Drive pedal	6-28
Engine speed control	
Shuttle lever	6-31
Speed matching	
Transmission controls	
Programming maximum speed	
Stationary control	
Anti jack knife	
Transmission display	
Manual mode	
Automatic mode	0-41
REAR POWER TAKE-OFF	C 40
Power Take-Off (PTO) operating precautions	
Power Take-Off (PTO) operating precautions	6-42
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment	6-42 6-43
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation	6-42 6-43 6-44
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system	6-42 6-43 6-44 6-49
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed	6-42 6-43 6-44 6-49 6-51
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls	6-42 6-43 6-44 6-49 6-51 6-53
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed	6-42 6-43 6-44 6-49 6-51 6-53
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation	6-42 6-43 6-44 6-49 6-51 6-53
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF	6-42 6-43 6-44 6-49 6-51 6-53 6-55
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation	6-42 6-43 6-44 6-49 6-51 6-53 6-55
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF	6-42 6-43 6-44 6-49 6-51 6-53 6-55
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation	6-42 6-43 6-44 6-49 6-51 6-53 6-55
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH	6-42 6-43 6-44 6-49 6-51 6-53 6-55
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC)	6-42 6-43 6-44 6-49 6-51 6-53 6-55 6-60
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC) Settings and display	6-42 6-43 6-44 6-49 6-51 6-53 6-55 6-60 6-62 6-62 6-66
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC) Settings and display Electronic Draft Control (EDC) operation	6-42 6-43 6-44 6-49 6-51 6-53 6-55 6-60 6-62 6-66 6-68
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC) Settings and display	6-42 6-43 6-44 6-49 6-51 6-53 6-55 6-60 6-62 6-66 6-68
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC) Settings and display Electronic Draft Control (EDC) operation External hitch controls	6-42 6-43 6-44 6-49 6-51 6-53 6-55 6-60 6-62 6-66 6-68
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC) Settings and display Electronic Draft Controls External hitch controls FRONT HITCH	6-42 6-43 6-44 6-51 6-53 6-55 6-60 6-62 6-66 6-68 6-74
Power Take-Off (PTO) operating precautions Changing the PTO output shaft Attaching PTO driven equipment PTO operation PTO 2 speed system PTO shiftable multi speed External PTO controls Auto PTO operation FRONT POWER TAKE OFF Power Take-Off (PTO) operation Auto PTO operation REAR HITCH Electronic Draft Control (EDC) Settings and display Electronic Draft Control (EDC) operation External hitch controls	6-42 6-43 6-44 6-51 6-53 6-55 6-68 6-60 6-62 6-66 6-68 6-74

Auxiliary front couplers (where fitted) External hitch controls	
HYDRAULIC REMOTE CONTROL VALVES	2.22
Remote control valvesOperating with remote valves	
Connecting remote cylinders	
Hydraulic oil level when using remote hydraulic equipment	6-95
ELECTRO-HYDRAULIC REMOTE CONTROL VALVES (whe	,
Remote control valvesSettings and adjustments	
Setting the remote valve priority	
Creating timer programs	
Connecting remote cylinders	
Operating with remote valves	
Mid mount remote valves	
External EHR controls	6-131
Hydraulic oil level when using remote hydraulic equipment	6-132
HYDRAULIC POWER BEYOND PORT	
Power beyond circuit	
Power beyond valve - Static description	
130 i owei beyond couplings	0-130
THREE POINT HITCH	
Attaching three-point hitch equipment	
Lift rod adjustment	
Top link adjustment Flexible link end adjustment	
Quick hitch	
Lower links	
DRAWBARS AND TOWING ATTACHMENTS	6 150
Drawbars and towing attachments	
Owniging drawbar	0-102
TRAILER BRAKING SYSTEMS	
Air-operated trailer brakes	
Trailer brake bias control	6-158
Hydraulic trailer brakes	
, and an analysis and an analy	11110 100
WHEEL TRACK ADJUSTMENT	
Front wheel track adjustment	6-160

	wheel alignment	
	ring stops	
	axle oscillation stops	
	fenderheel track adjustment	
	ge type axle (where fitted)	
_	ype axle (where fitted)ype axle (where fitted)	
-	rear wheels (where fitted)	
Duai	real wheels (where inted)	0-179
BALLAST	ING AND TIRES	
Ballas	sting and tires	6-182
Iron v	weights (where fitted)	6-185
Liquio	d ballast	6-188
	nflation	
Tire p	pressures and permissible loads	6-191
AUXILIAF	RY POWER CONNECTIONS	
	nostic socket	6-193
Traile	er electrical socket	6-194
Electric	cal power connectors	6-195
Intern	nal power connectors	6-195
Exter	nal power connectors	6-197
7 MAINTEN	ANCE	
/ IVI/ \II N I L I N/		
GENERA	L INFORMATION	
GENERA Introducti	L INFORMATION	7-1
GENERA Introducti Fuel requ	L INFORMATION ionuirement	7-2
GENERA Introducti Fuel requ Biodiesel	L INFORMATION ion uirement I fuel - Biodiesel fuels	7-2 7-4
GENERA Introducti Fuel requ Biodiesel Change t	L INFORMATION ion uirement I fuel - Biodiesel fuels	7-2 7-4 7-6
GENERA Introducti Fuel requ Biodiesel Change t Protective	L INFORMATION ion	7-2 7-4 7-6 7-7
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant	L INFORMATION ion uirement I fuel - Biodiesel fuels	7-2 7-4 7-6 7-7
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja	L INFORMATION ion	7-2 7-4 7-6 7-7 7-9
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja	L INFORMATION ion uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications	7-2 7-4 7-6 7-7 7-9 . 7-11
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie	L INFORMATION ion uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie Organic A	L INFORMATION ion uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant.	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie Organic A	L INFORMATION ion uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant.	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12 . 7-13
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie Organic A MAINTEN Maintena	L INFORMATION ion uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. IANCE CHART ance chart	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12 . 7-13
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie Organic A MAINTEN Maintena	L INFORMATION ion uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. HE WARNING LAMP LIGHTS	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12 . 7-13
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie Organic A MAINTEN Maintena WHEN TH	L INFORMATION ion Jirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. IANCE CHART ance chart HE WARNING LAMP LIGHTS the engine air cleaner outer element	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12 . 7-13 . 7-14
GENERA Introducti Fuel requision Biodiesel Change to Protective Lubricant Tractor ja General so Capacitie Organic A MAINTEN Maintena WHEN TH Change to Drain the	L INFORMATION ion Jirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. JANCE CHART ance chart HE WARNING LAMP LIGHTS the engine air cleaner outer element efuel system water separator	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-13 . 7-14
GENERA Introducti Fuel requision Biodiesel Change to Protective Lubricant Tractor ja General so Capacitie Organic A MAINTEN Maintena WHEN TH Change to Drain the	L INFORMATION ion Jirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. IANCE CHART ance chart HE WARNING LAMP LIGHTS the engine air cleaner outer element	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-13 . 7-14
GENERA Introducti Fuel requ Biodiesel Change t Protective Lubricant Tractor ja General s Capacitie Organic A MAINTEN Maintena WHEN TH Change t Drain the Check the	L INFORMATION ion .uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. IANCE CHART ance chart HE WARNING LAMP LIGHTS the engine air cleaner outer element of fuel system water separator. e brake fluid level 0 HOURS OR EACH DAY	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-13 . 7-14 . 7-15 . 7-15
GENERA Introducti Fuel requision diseal Change to Protective Lubricant Tractor jate General se Capacitie Organic A MAINTEN Maintena WHEN THE Change to Drain the Check the EVERY 10 Chec	L INFORMATION ion Jirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. JANCE CHART ance chart HE WARNING LAMP LIGHTS the engine air cleaner outer element e fuel system water separator. e brake fluid level O HOURS OR EACH DAY e engine coolant level	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12 . 7-13 . 7-14 . 7-15 . 7-15
GENERA Introducti Fuel requision diseal Change to Protective Lubricant Tractor jates General such Capacities Organic August MAINTEN Maintena WHEN The Change to Drain the Check	L INFORMATION ion .uirement I fuel - Biodiesel fuels the engine oil e devices ts and coolants acking points specifications es Acid Technology (OAT) coolant. IANCE CHART ance chart HE WARNING LAMP LIGHTS the engine air cleaner outer element of fuel system water separator. e brake fluid level 0 HOURS OR EACH DAY	7-2 7-4 7-6 7-7 7-9 . 7-11 . 7-12 . 7-13 . 7-14 . 7-15 . 7-17 . 7-18 . 7-19

Check windscreen washer reservoir	
FIRST 50 HOURS Service operations	7-23
EVERY 50 HOURS Clean the cab air filter Clean the SCR cover air ducts Clean the cooler section All grease fittings Check the front and the rear wheel nuts Check the tire pressures and the tire condition	7-26 7-27 7-28 7-35
EVERY 100 HOURS Inspect the poly V-belt	
EVERY 300 HOURS Check the battery fluid level Adjust the hand brake Check the transmission oil level, the rear axle oil level and the hydraulic oil level Check the 4WD front axle differential oil level and the hubs oil level Check the front PTO gearbox oil level	7-38 I 7-39 7-40
EVERY 600 HOURS Change engine oil and filter Change the first stage fuel filter and the fuel filter element Change the engine air cleaner outer element Change the charge pump oil filter and the gear pump oil filter Check the engine air intake connections Check the transmission oil cooler pipe couplings Clean the DEF/AdBlue in-line filter	7-44 7-45 7-46 7-47
EVERY 1200 HOURS OR ANNUALLY Change the cab air filters Change the main oil filter cartridge Change the 4WD differential oil Change the 4WD planetary hub oil Change the front PTO gearbox oil Grease the rear axle shaft bearing	7-50 7-51 7-52 7-52
EVERY 1200 HOURS OR EVERY 2 YEARS Change the DEF/AdBlue in-line filter Change the engine air cleaner inner element Check the valve tappet clearance	7-55

Change the air brake drier reservoir	. 7-57
Change the poly V-belts	. 7-58
Change the transmission oil, the rear axle oil and the hydraulic oil	. 7-59
9	
EVERY 1800 HOURS OR EVERY 2 YEARS	
Change the engine breather filter	. 7-60
EVERY 3600 HOURS OR EVERY 2 YEARS	
Change the DEF/AdBlue main filter	. 7-61
EVEDY 2000 HOURS OF EVEDY 4 VEARS	
EVERY 3600 HOURS OR EVERY 4 YEARS	
Change the engine coolant fluid - OAT type coolant	. 7-62
EVEDY 26 MONTHS	
EVERY 36 MONTHS	7.00
Check the air-conditioning system	. /-00
GENERAL MAINTENANCE	
Cleaning the tractor	7 67
· ·	
Check first stage fuel filter and water trap	
Bleeding the fuel system	
Hydraulic system hoses	. 7-70
Check the brake pedal latching/unlatching	. 7-70
Adjust the cab suspension (where fitted)	. 7-71
Headlight and work light adjustment	
Bulb replacement	
Fuses and relays	
•	
Protecting the electronic and electrical systems during battery charging or welding.	
Battery removal and installation	. 7-83
STORAGE	
Tractor storage	7-84
Preparation for use after storage	. 7-05
TROUBLESHOOTING	
FAULT CODE RESOLUTION	
Introduction	8-1
ALADM(C)	
ALARM(S)	
Fault codes and symbols	8-2
CVMDTOM/C)	
SYMPTOM(S)	
Engine	8-4
Transmission	
Electrical system	
Three-point hitch	8-6

	Brakes	8-6
	SPECIFICATIONS	
G	eneral dimensions	
	Frame - General specification	
	Capacities	
	Transmission - Capacity	
	Front axle system - Capacity	
	Engine	
	Transmission	
	Rear Power Take-Off (PTO)	
	Front Power Take-Off (PTO)	
	Hydraulic system	
	Remote control valves	
	Three-point hitch front	
	Brakes	
	Steering9	
	Electrical equipment 9	
	Minimum hardware tightening torques	
10	ACCESSORIES	
10	Radio (where fitted)	0-1
	External rear view mirrors	
	Auxiliary headlights	
	Rotating beacon	
	Front-end loader fixation points 1	
11	FORMS AND DECLARATIONS	
	Service record 1st 50 hour, Owner copy	11-3
	Service record 1st 50 hour, Dealer copy	

1 - GENERAL INFORMATION

Metric and imperial units abbreviations

Typical applications	Metric unit		Imperial unit	
<i>,</i> , , ,	Name	Symbol	Name	Symbol
Area (Land area)				
	hectare	ha	acre	ac
	square meter	m²	square foot	ft²
			square inch	in²
	square millimeter	mm²	square inch	in²
Electricity				
	ampere	Α	ampere	Α
	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 ^a
	-	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	Нр
	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	inH2O
	megapascal	MPa	pound per square inch	psi
	millibar	mbar		•
	bar	bar		
-			<u>.</u>	

Typical applications	Metric unit		al applications Metric unit Imperial unit		it
	Name	Symbol	Name	Symbol	
Temperature (other than the					
	degrees Celsius	°C	degrees Fahrenheit	°F	
Time					
	hour	h	hour	h	
	minute	min	minute	min	
	second	S	second	S	
Torque (includes bending n	noment, moment of force, an				
	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	m³	cubic yard	yd³	
				cu yd	
	liter		cubic inch	in³	
	liter		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	m³/min	cubic foot per minute	ft³/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 sou	ind 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 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 specification 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. 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 **7-15** of this Manual, are carried out at the recommended intervals.

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 op-

- eration 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.

CLEANING THE TRACTOR

Your tractor is a state- of- the- art machine with sophisticated, electronic controls. This should be taken into consideration when cleaning the tractor, particularly if using a high pressure washer. Even though every precaution has been taken to safeguard electronic components and connections, the pressure generated by some of these machines is such that complete protection against water ingress cannot be guaranteed.

When using a high pressure washer, do not stand too close to the tractor and avoid directing the jet at electronic components, electrical connections, breathers, seals, filler caps, etc. Never direct a cold water jet at a hot engine or exhaust.

Failure to comply with these rules will render the warranty null and void.

SAFETY

The pages in Section 2 list the precautions to be observed to ensure your safety and the safety of others. Read the safety precautions and follow the advice offered before operating the tractor.

FIRST 50 HOUR SERVICE

In Section 11, at the back of this Manual, you will find the 50- hour service reports.

NOTICE: It is important the 50 hour service is carried out as recommended to ensure your tractor provides optimum performance and efficiency.

After you have operated the tractor for 50 hours, take your tractor, together with this Manual, to your dealer. He will then perform the factory recommended 50 hour service and complete the service report sheets (pages 11-3 and 11-5). The first sheet (page 11-3) is your copy of the service performed. The second sheet (page 11-5) is the dealer's copy and should be removed by the dealer after the service has been carried out. Ensure that you and the dealer sign both copies.

SERVICE PARTS

It should be pointed out that genuine parts have been examined and approved by the Company. The installation

and/or use of 'non- genuine' products could have negative effects upon the design characteristics of your tractor and thereby affect its safety. The Company is not liable for any damage caused by the use of 'non- genuine' parts and accessories. Only genuine replacement parts should be used. The use of non- genuine parts may invalidate legal approvals associated with this product.

It is prohibited to carry out any modifications to the tractor unless specifically authorized, in writing, by the After Sales Service department of the Company.

WARRANTY

Your tractor is warranted according to legal rights in your country and the contractual agreement with the selling dealer. No warranty shall, however, apply if the tractor has not been used, adjusted and maintained according to the instructions given in the Operator's Manual.

USE OF BIODIESEL FUELS

NOTICE: Before using Biodiesel fuels in your tractor, refer to the information on page **7-4** regarding the storage and use of Bio diesel fuels.

EMISSION CONTROLS

NOTE: The engine and fuel system on your machine is 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!



Our support email: ebooklibonline@outlook.com