

ORIGINAL INSTRUCTIONS

PUMA 185
PUMA 200
PUMA 220
Tier 4B (final)
Tractor

OPERATOR'S MANUAL

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EVERY 10 HOURS OR EACH DAY

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EVERY 1200 HOURS OR EVERY 2 YEARS

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EVERY 3600 HOURS OR EVERY 2 YEARS

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EVERY 3600 HOURS OR EVERY 4 YEARS

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EVERY 36 MONTHS

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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	m²	square foot	ft²
			square inch	in²
	square millimeter	mm²	square inch	in²
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 ^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	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	inH2O
	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 ³	cubic yard	yd ³
				cu yd
	liter	l	cubic inch	in ³
	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 ³ /min	cubic foot per minute	ft ³ /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 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 authorised 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 authorised 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 authorised 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 7-14 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 **11-1** and **11-3**). The first sheet (page **11-1**) is your copy of the service performed. The second sheet (page **11-3**) 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 it's 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 authorised, 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!*



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