Puma 170
Puma 185
Puma 200
Puma 215
Puma 170 CVT
Puma 185 CVT
Puma 200 CVT
Puma 215 CVT
Puma 230 CVT
Tractor

OPERATOR'S MANUAL

Part number 47457072
5th edition English
March 2013

CASE IH AGRICULTURE

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual | Publication 47457072
Order the manual at mid-west-tech.com >

Contents

1 GENERAL INFORMATION

METRIC AND IMPERIAL UNITS ABBREVIATIONS 1-1
Note to the Owner 1-3
OPERATOR'S MANUAL STORAGE 1-5
PRODUCT IDENTIFICATION 1-6
ENGINE IDENTIFICATION 1-7
DRIVELINE IDENTIFICATION 1-8
Part identification 1-8
CAB IDENTIFICATION 1-9
ECOLOGY AND THE ENVIRONMENT 1-10
NOISE LEVEL 1-11
PROGRAMMING TRACTOR FUNCTIONS 1-11
BEFORE OPERATING THE TRACTOR 1-12
INTERNATIONAL SYMBOLS 1-13
VIBRATION LEVEL INFORMATION SHEET 1-14
MACHINE STABILITY 1-15
INSTRUCTOR'S SEAT 1-19
SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM 1-20

2 SAFETY INFORMATION

SAFETY DECALS 2-1
SAFETY PRECAUTIONS 2-8
BEFORE DRIVING THE TRACTOR 2-9
DRIVING THE TRACTOR 2-10
OPERATING THE TRACTOR 2-11
OPERATING THE P.T.O. 2-13
OPERATING THE EXTERNAL CONTROLS 2-13
SERVICING THE TRACTOR 2-14
PREVENTION OF FIRE OR EXPLOSION 2-17
DIESEL FUEL 2-18
FIRE EXTINGUISHER 2-19
PROTECTION OFFERED BY THE TRACTOR 2-20
INTENDED USE STATEMENT 2-23
SAFETY ASPECTS 2-25

3 CONTROLS/INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

INTRODUCTION 3-1
Cab - Localisation overview 3-5
CAB AIR FILTERS 3-7
IN CAB STORAGE (where fitted) 3-8
CABLE AND WIRING ROUTING 3-9
MOBILE TELEPHONE USAGE 3-10
IMPLEMENT MONITOR INSTALLATION 3-11
CAB AIR PRESSURISATION MONITOR (where fitted) 3-11

OPERATOR'S SEAT

AIR SUSPENSION SEAT 3-13
AIR SUSPENSION SEAT DELUXE 3-15
ARMREST CONTROLS 3-20

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

SEAT BELT 3-21

INSTRUCTOR'S SEAT
INSTRUCTIONAL SEAT (where fitted) 3-22

FORWARD CONTROLS
KEY- START SWITCH 3-23
HAZARD WARNING LIGHT SWITCH 3-23
LIGHT-/ TURN LEVER 3-24
FOLLOW ME HOME LIGHTS 3-24
WINDSHIELD WIPER AND WASHER CONTROLS 3-25
ELECTRONIC PARK BRAKE 3-26
ANTI-LOCK BRAKING SYSTEM ABS Operation 3-30
FOOT BRAKES 3-38
EXHAUST BRAKE (where fitted) 3-39
STEERING COLUMN 3-40
ADJUSTABLE AIR VENTS 3-40

LEFT-HAND SIDE CONTROLS
HANDBRAKE 3-41

RIGHT-HAND SIDE CONTROLS
INTEGRATED CONTROL PANEL 3-42
INTEGRATED CONTROL PANEL 3-43
HAND THROTTLE 3-44
MULTI FUNCTION HANDLE 3-44

REARWARD CONTROLS
SWITCHES ON C-PILLAR 3-45
HYDRAULIC MASTER SWITCH 3-46
HEATED SCREENS (where fitted) 3-47
FAST STEERING SYSTEM (where fitted) 3-48
BATTERY ISOLATOR SWITCH 3-50
CLIMATE CONTROLS 3-51
MANUAL TEMPERATURE CONTROL 3-53
AUTOMATIC TEMPERATURE CONTROL (ATC) 3-54

OVERHEAD CONTROLS
SWITCH PANEL WORKLIGHTS 3-56
RADIO/CASSETTE/CD PLAYER (where fitted) 3-57
INTERIOR LIGHT 3-58

INSTRUMENT CLUSTER
INTEGRATED CONTROL UNIT 3-59
GAUGES 3-59
INDICATOR AND WARNING LIGHTS 3-61
DISPLAYS 3-64
KEYPAD BASIC 3-65
KEYPAD ENHANCED 3-66
SELECTING OR CHANGING THE DISPLAY SETTINGS 3-68

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

ADJUST MENU 3-69
CONFIGURE MENU 3-71
PERFORMANCE MONITOR 3-74
ARMREST COLOUR DISPLAY 3-79
POP- UP SCREENS ON COLOUR DISPLAY 3-81
PERFORMANCE MONITOR ON COLOUR DISPLAY 3-87
PROGRAMMING THE DISPLAYS 3-90
ALARM FUNCTIONS 3-93
ACCESSING STORED ERROR CODES 3-95
WARNING AND ADVISORY SYMBOLS 3-96
WARNING AND ADVISORY SYMBOLS 3-107

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT
TRACTOR REFUELLING 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
Transmission - Operating Cold weather 4-8
BOOSTING THE BATTERY 4-9

STOPPING THE UNIT
STOPPING THE ENGINE 4-10
AUTOMATIC ENGINE SHUTDOWN 4-10
AUTOMATIC ENGINE SHUTDOWN WITH ENHANCED KEYPAD (where fitted) 4-11

MOVING THE UNIT
OPERATING IN COLD TEMPERATURES 4-12
REVERSIBLE ENGINE FAN 4-14

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 5-1
TOWING THE TRACTOR 5-3

6 WORKING OPERATIONS

GENERAL INFORMATION

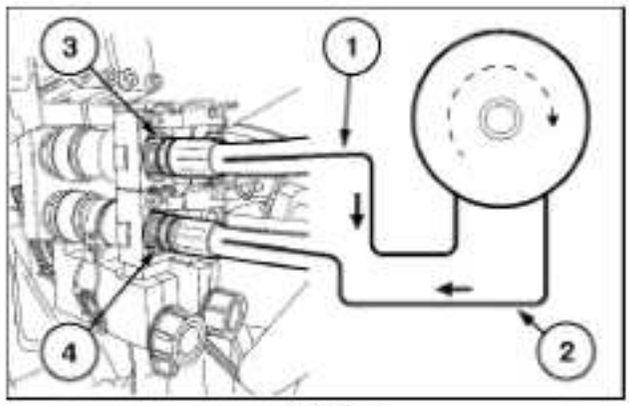
MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

OPERATING WITH REMOTE VALVES

Operating Continuous Flow Hydraulic Equipment

NOTICE: *When operating continuous flow equipment, the remote control valve lever must not be moved rearward to the neutral* ***(N)*** *or raise* ***(R)*** *positions as damage to the equipment may result. Always select the motor mode function when operating with hydraulic motors.*

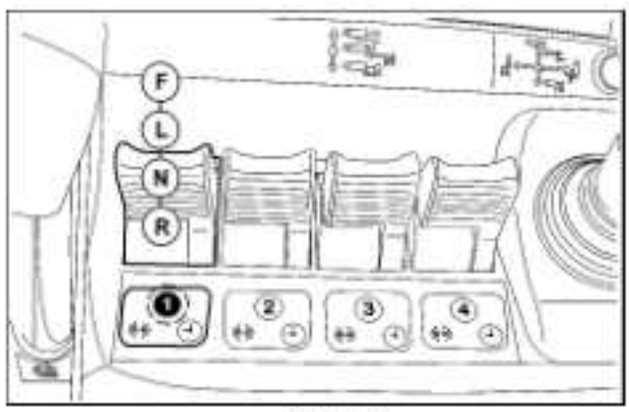
Continuous flow hydraulic equipment (e.g. hydraulic motors) should be connected to the valve couplers with the pressure hose **(1)** connected to the upper coupler **(3)** and the return hose **(2)** connected to the lower coupler **(4)** of the same valve. Alternatively, the return hose may connected to the low pressure return circuit (see page **6-163**, 'Return Oil Line').



1

The oil flow should be adjusted to regulate the motor speed. If the flow is too high, the 3- point hitch and other remote valves may slow down or stop. Controlling the flow in this way will ensure that the hydraulic system will only supply the oil required by the motor.

With the remote control valve lever fully forward in the float **(F)** position, the motor will be stationary. The hydraulic motor will operate if the lever is pulled back to the retract position **(L)**. To stop the motor, move the lever from the lower position to the float position. In the float position the motor will be able to stop slowly, which will not damage the motor.



2

Observe the following to further protect the tractor and equipment.

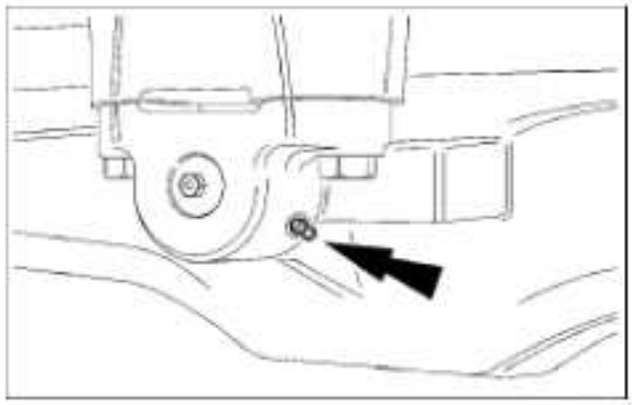
- Do not open any bypass valve in the equipment or motor. Adjust the oil flow through the valve to regulate the rate of flow or speed of the motor.
- To ensure optimum hydraulic oil cooling, operate continuous flow equipment at the highest flow setting and lowest engine speed that will give the required machine performance and speed.
- It is recommended that a temperature gauge, where available, is installed in the remote circuit when using hydraulic motors for continuous operation. If over- heating occurs, stop the hydraulic motor until the oil cools. Ensure the flow control setting is at maximum and the engine speed at a minimum, appropriate to machine performance.

If operating conditions are normal and high temperatures persist, install an oil cooler in the motor return circuit. The maximum recommended operating temperature of the oil is **125 °C** (**257 °F**). Your authorised dealer can supply a suitable oil cooler and the necessary fittings or make the installation for you.

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

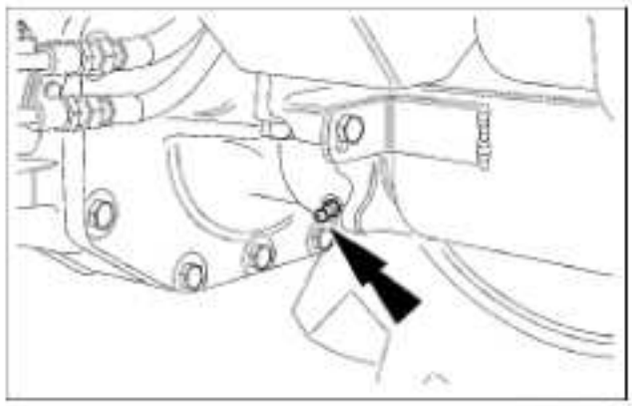
Front Trunnion Pin (standard 4WD axle)

Apply a grease gun to the lubrication fitting as shown.



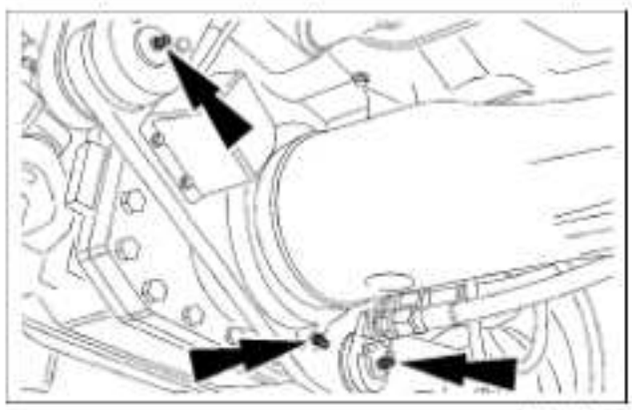
Rear Trunnion Pin (standard 4WD axle)

Apply a grease gun to the lubrication fitting as shown.



Front Trunnion Pin, Suspension Upper and Lower Damper Pivot (suspended 4WD axle)

Apply a grease gun to the lubrication fittings as shown.



MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

REMOTE CONTROL VALVES

Model	Puma 170 PUMA 170 CVT	Puma 185 PUMA 185 CVT	Puma 200 PUMA 200 CVT	Puma 215 PUMA 215 CVT	PUMA 230 CVT
Remote control valves Rear					
Electronic remote valves	x3 = Standard, x4 or x5 (optional)				
Pressure at rated engine speed	**195 - 205 bar (2827.5 - 2972.5 psi)**				
Flow through one valve at rated engine speed	**90 - 100 bar (1305.0 - 1450.0 psi)**				
ISO Power beyond couplers (optional)	Compatible with electronic valves				
Remote control valves Front					
With electronic mid mount remote valves and joystick	x2, x3, x4 (optional)				
Flow through one valve at rated engine speed	**90 - 100 bar (1305.0 - 1450.0 psi)**				

Model	Puma 170 PUMA 170 CVT	Puma 185 PUMA 185 CVT	Puma 200 PUMA 200 CVT	Puma 215 PUMA 215 CVT	PUMA 230 CVT
Remote control valves Rear					
With electronic remote valves	x3 = Standard, x4 or x5 (optional)				
With mechanical remote valves	x3 = Standard, or x4 (optional)				
Pressure at rated engine speed	**195 - 205 bar (2827.5 - 2972.5 psi)**				
Flow through one valve at rated engine speed	**90 - 100 bar (1305.0 - 1450.0 psi)**				
ISO Power beyond couplers (optional)	Compatible with mechanical or electronic valves				
Remote control valves Front					
With electronic mid mount remote valves and joystick	x2, x3, x4 (optional)				
Flow through one valve at rated engine speed	**90 - 100 bar (1305.0 - 1450.0 psi)**				

THREE POINT HITCH FRONT

Model	Puma 170 PUMA 170 CVT	Puma 185 PUMA 185 CVT	Puma 200 PUMA 200 CVT	Puma 215 PUMA 215 CVT	PUMA 230 CVT
Three point hitch - Front					
Linkage category	Category III L				
Lift capacity through full range: At ball ends	**3785 kg (8344.5 lb)**				
Lift capacity through full range: At **610 mm (24.0 in)** in front of ball ends	**3620 kg (7980.7 lb)**				

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

19. Location: Fuel tank

Only fill the DEF/AdBlue® tank with approved DEF/AdBlue® solution. Do not fill with diesel fuel or water. Refer to Operator's Manual.

Part No. 84284896 C



84284896_C 20

20. Location: Fuel tank

Only us Ultra Low Sulfur Diesel (ULSD) fuel.

Part No. 87493418 A



87493418_A 21

21. Location: Right-hand side of seat on cab floor.

WARNING:
Always carry a fire extinguisher at the space provided for your own and others safety.
Failure to comply could result in death or serious injury.

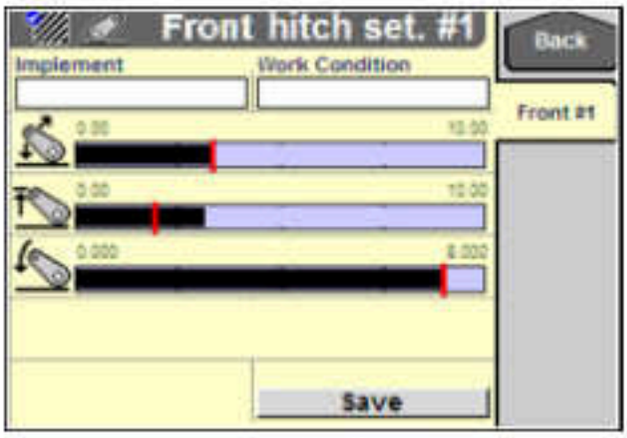
Part No. 84282119



84282119 22

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >

Front hitch notebook (on colour displays)
Colour display (where fitted) will offer the possibility to store optimum settings for a certain implement and in certain working condition so that those settings can be recalled any time and front hitch controls adjusted so to match them.
This capability is provided through specific and dedicated screens.



14 12

MidWestTech | Case Puma 170, 185, 200, 215 , 230 CVT Tractor Operator's Manual |... Order the manual at mid-west-tech.com >