Magnum<sup>™</sup> 250
Magnum<sup>™</sup> 280
Magnum<sup>™</sup> 310
Magnum<sup>™</sup> 340
Magnum<sup>™</sup> 380
Magnum<sup>™</sup> 310 Rowtrac<sup>™</sup>
Magnum<sup>™</sup> 340 Rowtrac<sup>™</sup>
Magnum<sup>™</sup> 380 Rowtrac<sup>™</sup>
Tractor

PIN ZGRF05001 and above

**OPERATOR'S MANUAL** 



# **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	
Engine tampering	
Tractor intended use	
Electro-magnetic compatibility (EMC)	
Manual scope	
ISOBUS certification	
Product identification	
Machine orientation	
Component Identification	
Declaration of conformity	
Selective Catalytic Reduction (SCR) system	
Ocidente Odiaryne Reddenor (OOR) system	
2 SAFETY INFORMATION Safety rules and signal word definitions	2_1
Safety rules - General	
Safety rules - General maintenance safety	
Safety rules - Wheels and tires	
Safety rules - Driving on public roads and general transportation safety .	
Safety rules - Fire and explosion prevention	
Safety rules - General battery safety	
Safety rules - Hydraulic system safety	
Safety rules - Passenger seat safety	
Safety rules - Passenger seat safety	
Safety rules - Power Take-Off (PTO)	
Safety rules - Reflectors and warning lights	
Safety rules - Roll Over Protective Structure (ROPS)	
Safety rules - Cab protection	
Safety rules - Air conditioning system	
Safety rules - Personal Protective Equipment (PPE)	
Safety rules - Do Not Operate tag	
Safety rules - Hazardous chemicals	
Safety rules - Utility safety	
Safety rules - Electrical storm safety	
Safety rules - Mounting and dismounting	
Safety rules - Working at heights	
Safety rules - Lifting and overhead loads	
Safety rules - Implements, tools and trailers	
Safety rules - Roll over and tip over	
Ecology and the environment	
Safety signs	2-14

Selective Catalytic Reduction (SCR) exhaust treatment - Safety signs	2-29
Noise levelsVehicle vibration levelsFire extinguisher	2-37 2-38
Emergency exit	2-40
3 CONTROLS AND INSTRUMENTS	
ACCESS TO OPERATOR'S PLATFORM Tractor access Lower step	
OPERATOR'S SEAT Control identification	3-4
PASSENGER'S SEAT Overview	3-8
FORWARD CONTROLS Steering column	
Front console	
LEFT-HAND SIDE CONTROLS Emergency brake lever	3-16
RIGHT-HAND SIDE CONTROLS Armrest console Multi function handle Minimum/maximum RPM throttles Control panel Remote valve controls	3-18 3-23 3-26
Joystick	3-38
REARWARD CONTROLS  Fender console  Automatic temperature controls  Automatic temperature control system  Ventilation	3-44 3-47
OVERHEAD CONTROLS Interior lamps	

	EXTERIOR CONTROLS	
	Rear fender	
	Front hitch	. 3-53
	INSTRUMENT CLUSTER	
	Overview	
	Gauges	
	Status and warning icons	
	Upper display	
	Lower display Keypad	
	Setup menu	
	Rear tire radius and track radius charts	
	Adjust menu	
	Performance features	
1	OPERATING INSTRUCTIONS	
+		
	COMMISSIONING THE UNIT	
	Engine - Safety rules	4-1
	STARTING THE UNIT	
	Normal engine starting	4-3
	Cold starting aids	
	Cold temperature operation	
	CTODDING THE HINT	
	STOPPING THE UNIT Stopping the engine	1 11
	Stopping the engine	. 4-11
	MOVING THE UNIT	
	FULL POWERSHIFT TRANSMISSION	
	Powershift transmission	. 4-13 111
	Inching pedal and throttle	
	Powershift transmission controls	
	Upper display - Powershift transmission	
	Driving the Powershift vehicle	
	Setting default gears	
	Automatic Productivity Management (APM)	
	CONTINUOUSLY VARIABLE TRANSMISSION (CVT)	
	Introduction	. 4-35
	CVX brake, pedal and throttle operation	. 4-36
	CVX controls	
	Upper display	
	CVX operation	
	Eco-Draft or Shuttle mode	
	Driving the CVX transmission	
	Transmission messages  POWERSHIFT AND CVT TRANSMISSIONS	
	FOMEROUIL I AMD CAT TRAMOMIODIONO	4-00

Mechanical Front Drive (MFD)	
Differential lock system	
Suspended axle	
Ride control	
Engine power boost	
Constant engine speed	
Suspended cab	
Electronic end of row system	4-76
PARKING THE UNIT	
Automatic park lock	4-82
5 TRANSPORT OPERATIONS	
ROAD TRANSPORT	
Tractor warning lamps	5_1
Safe transport speed	
	5-5
SHIPPING TRANSPORT	
Securing the tractor for shipping	5-4
RECOVERY TRANSPORT	
Safety rules	
Towing the tractor	5-6
6 WORKING OPERATIONS	
GENERAL INFORMATION Overview	6_1
	0-1
REAR POWER TAKE-OFF (PTO)	
Safety rules	
Connecting the Power Take-Off (PTO)	
Interchangeable Power Take-Off (PTO) shaft	
Rear Power Take-Off (PTO) operation	
Power Take-Off (PTO) fender switch operation	
Auto Power Take-Off (PTO) operation	6-18
FRONT POWER TAKE-OFF (PTO)	
Overview	6-21
Front Power Take-Off (PTO) operation	6-22
REAR HITCH	
Identification	6-25
Link adjustment	
Hitch high clearance adjustment	
Hydraulic links	

Automatic telescoping stabilizers	Sway limiter adjustment	6-35
Mechanical float adjustment.         6-40           Hitch quick coupler - Category III/IIIN         6-41           Hitch operation         6-46           Hitch remote switch operation         6-51           Position control operation         6-53           Load control operation         6-55           Slip control operation         6-57           Hitch set point         6-59           FRONT HITCH         Overview           Overview         6-61           Front hitch operation         6-62           DRAWBARS AND TOWING ATTACHMENTS         Safety rules           Safety rules         6-69           Drawbar capacity/position         6-70           Adjusting the drawbar         6-74           TRAILER HITCHES         Clevis and special drawbars         6-76           Clevis and special drawbars         6-76           Automatic trailer hitch         6-78           Auto pickup hitch operation         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         Safety rules         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         Auxiliary power and lighting <td>Automatic telescoping stabilizers</td> <td> 6-36</td>	Automatic telescoping stabilizers	6-36
Hitch quick coupler - Category III/IIIN	Lower link block adjustment	6-38
Hitch operation   6-46     Hitch remote switch operation   6-51     Position control operation   6-53     Load control operation   6-55     Slip control operation   6-57     Hitch set point   6-59     FRONT HITCH     Overview   6-61     Front hitch operation   6-62     DRAWBARS AND TOWING ATTACHMENTS     Safety rules   6-69     Drawbar capacity/position   6-70     Adjusting the drawbar   6-74     TRAILER HITCHES   6-76     Clevis and special drawbars   6-76     Automatic trailer hitch   6-78     Auto pickup hitch operation   6-81     Manual trailer hitch   6-83     TRAILER BRAKING SYSTEMS   3-86     Safety rules   6-86     Air pressure monitoring   6-87     Auxiliary power and lighting   6-88     Auxiliary power and lighting   6-87     Auxiliary CONNECTIONS   6-90     Radar connection   6-91     Implement ISOBUS connector   6-92     HYDRAULIC REMOTE CONTROL VALVES     Valve couplers and connections   6-90     Motor return circuit   6-97     Power beyond circuit   6-97     Power beyond circuit   6-97     Power beyond circuit   6-98     Flow capacity   6-99     Hydraulic transport lock   6-102     Remote valve display screens   6-106	Mechanical float adjustment	6-40
Hitch operation   6-46     Hitch remote switch operation   6-51     Position control operation   6-53     Load control operation   6-55     Slip control operation   6-57     Hitch set point   6-59     FRONT HITCH     Overview   6-61     Front hitch operation   6-62     DRAWBARS AND TOWING ATTACHMENTS     Safety rules   6-69     Drawbar capacity/position   6-70     Adjusting the drawbar   6-74     TRAILER HITCHES   6-76     Clevis and special drawbars   6-76     Automatic trailer hitch   6-78     Auto pickup hitch operation   6-81     Manual trailer hitch   6-83     TRAILER BRAKING SYSTEMS   3-86     Safety rules   6-86     Air pressure monitoring   6-87     Auxiliary power and lighting   6-88     Auxiliary power and lighting   6-87     Auxiliary CONNECTIONS   6-90     Radar connection   6-91     Implement ISOBUS connector   6-92     HYDRAULIC REMOTE CONTROL VALVES     Valve couplers and connections   6-90     Motor return circuit   6-97     Power beyond circuit   6-97     Power beyond circuit   6-97     Power beyond circuit   6-98     Flow capacity   6-99     Hydraulic transport lock   6-102     Remote valve display screens   6-106	Hitch quick coupler - Category III/IIIN	6-41
Position control operation	Hitch operation	6-46
Load control operation	Hitch remote switch operation	6-51
Load control operation	Position control operation	6-53
Hitch set point		
Hitch set point	Slip control operation	6-57
Overview Front hitch operation         6-61 Front hitch operation         6-62           DRAWBARS AND TOWING ATTACHMENTS Safety rules         6-69 Drawbar capacity/position         6-70 Adjusting the drawbar         6-70 Adjusting the drawbar         6-74           TRAILER HITCHES Clevis and special drawbars. Auto pickup hitch operation. Auto pickup operation. Auto pickup power and lighting. Auto power connection. Auto pickup power and lighting. Auto power power and lighting. Auto power power and lighting. Auto pickup power and lighting. Auto power power power and lighting. Auto power power power and lighting. Auto power power power power power power and lighting. Auto power p		
Overview Front hitch operation         6-61 Front hitch operation         6-62           DRAWBARS AND TOWING ATTACHMENTS Safety rules         6-69 Drawbar capacity/position         6-70 Adjusting the drawbar         6-70 Adjusting the drawbar         6-74           TRAILER HITCHES Clevis and special drawbars. Auto pickup hitch operation. Auto pickup operation. Auto pickup power and lighting. Auto power connection. Auto pickup power and lighting. Auto power power and lighting. Auto power power and lighting. Auto pickup power and lighting. Auto power power power and lighting. Auto power power power and lighting. Auto power power power power power power and lighting. Auto power p	FRONT HITCH	
Front hitch operation   6-62		6-61
Safety rules         6-69           Drawbar capacity/position         6-70           Adjusting the drawbar         6-74           TRAILER HITCHES         6-76           Clevis and special drawbars         6-78           Automatic trailer hitch         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         6-87           Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-92           HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-98           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106	Front hitch operation	6-62
Safety rules         6-69           Drawbar capacity/position         6-70           Adjusting the drawbar         6-74           TRAILER HITCHES         6-76           Clevis and special drawbars         6-78           Automatic trailer hitch         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         6-87           Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-92           HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-98           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106	DDAMADA AND TOMING ATTACHMENTS	
Drawbar capacity/position         6-70           Adjusting the drawbar         6-74           TRAILER HITCHES         Clevis and special drawbars         6-76           Automatic trailer hitch         6-78           Auto pickup hitch operation         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         Safety rules           Safety rules         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         6-87           Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-92           HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-99           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106		6-60
Adjusting the drawbar   6-74	· · · · · · · · · · · · · · · · · · ·	
TRAILER HITCHES         6-76           Clevis and special drawbars.         6-78           Automatic trailer hitch         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         6-85           Safety rules.         6-85           Trailer brake connections.         6-86           Air pressure monitoring.         6-87           AUXILIARY CONNECTIONS         6-87           Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-92           HYDRAULIC REMOTE CONTROL VALVES         6-92           Valve couplers and connections         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-98           Flow capacity         6-99           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106		
Clevis and special drawbars         6-76           Automatic trailer hitch         6-78           Auto pickup hitch operation         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         6-85           Safety rules         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         6-87           Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-91           HYDRAULIC REMOTE CONTROL VALVES           Valve couplers and connections         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-98           Flow capacity         6-99           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106	Adjusting the drawbar	0-74
Automatic trailer hitch         6-78           Auto pickup hitch operation         6-81           Manual trailer hitch         6-83           TRAILER BRAKING SYSTEMS         6-85           Safety rules         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         6-87           Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-91           HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections         6-92           HYDRAULIC REMOTE CONTROL VALVES         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-99           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106	TRAILER HITCHES	
Auto pickup hitch operation       6-81         Manual trailer hitch       6-83         TRAILER BRAKING SYSTEMS       Safety rules       6-85         Trailer brake connections       6-86         Air pressure monitoring       6-87         AUXILIARY CONNECTIONS       Auxiliary power and lighting       6-88         Cab power connections       6-90         Radar connection       6-91         Implement ISOBUS connector       6-92         HYDRAULIC REMOTE CONTROL VALVES       Valve couplers and connections       6-93         Motor return circuit       6-97         Power beyond circuit       6-98         Flow capacity       6-99         Hydraulic transport lock       6-101         Operating the controls       6-102         Remote valve display screens       6-106	Clevis and special drawbars	6-76
Manual trailer hitch       6-83         TRAILER BRAKING SYSTEMS       Safety rules       6-85         Trailer brake connections       6-86         Air pressure monitoring       6-87         AUXILIARY CONNECTIONS       Auxiliary power and lighting       6-88         Cab power connections       6-90         Radar connection       6-91         Implement ISOBUS connector       6-92         HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections       6-93         Motor return circuit       6-97         Power beyond circuit       6-98         Flow capacity       6-99         Hydraulic transport lock       6-101         Operating the controls       6-102         Remote valve display screens       6-106		
TRAILER BRAKING SYSTEMS         6-85           Safety rules         6-85           Trailer brake connections         6-86           Air pressure monitoring         6-87           AUXILIARY CONNECTIONS         Auxiliary power and lighting         6-88           Cab power connections         6-90           Radar connection         6-91           Implement ISOBUS connector         6-92           HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections         6-93           Motor return circuit         6-97           Power beyond circuit         6-98           Flow capacity         6-98           Hydraulic transport lock         6-101           Operating the controls         6-102           Remote valve display screens         6-106		
Safety rules       6-85         Trailer brake connections       6-86         Air pressure monitoring       6-87         AUXILIARY CONNECTIONS       Auxiliary power and lighting       6-88         Cab power connections       6-90         Radar connection       6-91         Implement ISOBUS connector       6-92         HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections       6-93         Motor return circuit       6-97         Power beyond circuit       6-98         Flow capacity       6-98         Hydraulic transport lock       6-101         Operating the controls       6-102         Remote valve display screens       6-106	Manual trailer hitch	6-83
Safety rules       6-85         Trailer brake connections       6-86         Air pressure monitoring       6-87         AUXILIARY CONNECTIONS       Auxiliary power and lighting       6-88         Cab power connections       6-90         Radar connection       6-91         Implement ISOBUS connector       6-92         HYDRAULIC REMOTE CONTROL VALVES         Valve couplers and connections       6-93         Motor return circuit       6-97         Power beyond circuit       6-98         Flow capacity       6-98         Hydraulic transport lock       6-101         Operating the controls       6-102         Remote valve display screens       6-106	TRAILER BRAKING SYSTEMS	
Trailer brake connections 6-86 Air pressure monitoring 6-87  AUXILIARY CONNECTIONS  Auxiliary power and lighting 6-88 Cab power connections 6-90 Radar connection 6-91 Implement ISOBUS connector 6-92  HYDRAULIC REMOTE CONTROL VALVES  Valve couplers and connections 6-93 Motor return circuit 6-97 Power beyond circuit 6-97 Power beyond circuit 6-98 Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106	Safety rules	6-85
AUXILIARY CONNECTIONS  Auxiliary power and lighting 6-88 Cab power connections 6-90 Radar connection 6-91 Implement ISOBUS connector 6-92  HYDRAULIC REMOTE CONTROL VALVES Valve couplers and connections 6-93 Motor return circuit 6-97 Power beyond circuit 6-98 Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106	Trailer brake connections	6-86
Auxiliary power and lighting 6-88 Cab power connections 6-90 Radar connection 6-91 Implement ISOBUS connector 6-92  HYDRAULIC REMOTE CONTROL VALVES Valve couplers and connections 6-93 Motor return circuit 6-97 Power beyond circuit 6-98 Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106	Air pressure monitoring	6-87
Auxiliary power and lighting 6-88 Cab power connections 6-90 Radar connection 6-91 Implement ISOBUS connector 6-92  HYDRAULIC REMOTE CONTROL VALVES Valve couplers and connections 6-93 Motor return circuit 6-97 Power beyond circuit 6-98 Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106	ALIXII IARY CONNECTIONS	
Cab power connections6-90Radar connection6-91Implement ISOBUS connector6-92HYDRAULIC REMOTE CONTROL VALVESValve couplers and connections6-93Motor return circuit6-97Power beyond circuit6-98Flow capacity6-99Hydraulic transport lock6-101Operating the controls6-102Remote valve display screens6-106		6-88
Radar connection 6-91 Implement ISOBUS connector 6-92  HYDRAULIC REMOTE CONTROL VALVES  Valve couplers and connections 6-93  Motor return circuit 6-97 Power beyond circuit 6-98 Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106		
Implement ISOBUS connector6-92HYDRAULIC REMOTE CONTROL VALVESValve couplers and connections6-93Motor return circuit6-97Power beyond circuit6-98Flow capacity6-99Hydraulic transport lock6-101Operating the controls6-102Remote valve display screens6-106	•	
Valve couplers and connections6-93Motor return circuit6-97Power beyond circuit6-98Flow capacity6-99Hydraulic transport lock6-101Operating the controls6-102Remote valve display screens6-106		
Valve couplers and connections6-93Motor return circuit6-97Power beyond circuit6-98Flow capacity6-99Hydraulic transport lock6-101Operating the controls6-102Remote valve display screens6-106	HYDDALII IC DEMOTE CONTDOL VALVES	
Motor return circuit6-97Power beyond circuit6-98Flow capacity6-99Hydraulic transport lock6-101Operating the controls6-102Remote valve display screens6-106		6-03
Power beyond circuit 6-98 Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106		
Flow capacity 6-99 Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106		
Hydraulic transport lock 6-101 Operating the controls 6-102 Remote valve display screens 6-106		
Operating the controls		
Remote valve display screens6-106		
· ·		
nemote Hydraulic auto mode	Remote hydraulic auto mode	

Auto depth control	
BALLASTING THE TRACTOR	
Guidelines	6-117
Tire load and inflation charts	. 6-126
Weights, cast metal	
Wheel slip and power hop performance	. 6-137
MECHANICAL FRONT DRIVE (MFD) AXLES	
Front axle identification	
Tire combinations and tread positions	
Steering and oscillation stops	
Tread and fender settings - Class 4.75 and 5.0 saddle suspended front axles	
Tread and fender settings - Class 5.0 wide front axles	
Front wheel fenders	
Front wheel fenders - Class 4.75 and 5.0 fixed and suspended axles	
Front wheel fenders - Class 5.0 wide fixed and suspended axles	. 6-166
REAR AXLE	
Rear wheel installation	. 6-171
Rear wheel tread settings	
REAR TRACKS	
Tire load and inflation charts Tractors with rear tracks	. 6-176
Maximum front ballast recommendations	
Front wheel tread settings	
Track preconditioning	
Factory and field track settings	. 6-185
7 MAINTENANCE	
GENERAL INFORMATION	
Safety rules	7-1
Maintenance guidelines	
Opening the hood	7-3
Closing the hood	7-4
Filling the fuel tank	
Filling the Diesel Exhaust Fluid (DEF)/AdBlue® tank	
Battery disconnect switch	
Battery access and service	
Tire and rim service  Tractor jacking points	
Capacities	
Consumables - Engine oil	
Consumables - Transmission/hydraulic system fluid	
Consumables - Diesel fuel	
	=

Consumables - Biodiesel fuels	7-19 7-21
Consumables - Organic Acid Technology (OAT) coolant	
Maintenance chart notes	
Maintenance summary decal	
Maintenance planning	
Maintenance chart	7-27
At warning message display	7.00
Air filter service icon/message*	
Water in fuel message	
Transmission oil filter switch	
First 10 to 50 hours	7 40
Wheel bolt torque	
Differential and planetary oil	
Differential and planetary off	7 72
Every 10 hours or daily	
Engine oil level	7-43
Transmission oil level	7-44
Engine coolant level	
Air reservoirRear hitch and front axle	
real filter and from axic	7-40
Every 50 hours or weekly	
Engine auxiliary fuel filter	7-46
First 100 hours	
First 100 hours  Powershift transmission clutch calibration	7-48
Every 100 hours	
Front hitch	7-54
Front Power Take-Off (PTO) drive shaft	
Input shaft for the front Power Take-Off (PTO) dropbox	7-57
Every 200 hours	
Track alignment	7-59
Firem (200 horizo	
Every 300 hours	7.00
Battery water level (Note B)	
Engine air intake and exhaust hoses  Engine coolant level - deaeration tank	
Linging 6001ant level - deactation talk	1-04

Weight bolt torque	7-65
Front axle (Note A)	7-66
Rear hitch (Note A)	7-68
Fuel tank	7-70
Differential and planetary oil level (Note B)	7-71
Transmission oil pressure	7-72
Front Power Take-Off (PTO) oil level	7-73
Every 400 hours	
	7 74
Cab air filter*	7-74
Every 600 hours	
Engine oil and filter*	7-77
Engine coolant antifreeze protection	7-80
Engine coolant hoses and clamps	7-80
Engine fuel filter*	7-82
Engine auxiliary fuel filter*	
Fuel system bleeding	
Changeable Power Take-Off (PTO) internal splines	
Diesel Exhaust Fluid (DEF)/AdBlue® in-line filter	
Engine air precleaner*	
From (1000 borns or approally)	
Every 1000 hours or annually	
Pneumatic brake system dryer	
Powershift transmission clutch calibration	
Front Power Take-Off (PTO) oil and filter*	
Front Power Take-Off (PTO) dropbox oil	/-100
Every 1200 hours or annually	
Differential and planetary oil	7-101
Engine air filters*	
T	
Every 1500 hours	
Transmission oil	
Regulated system oil filter*	
Main transmission oil filter*	
Idler/roller wheel oil     Engine crankcase filter*	
Lingine Grankoase inter	/ - 1 1 -
Every 3000 hours	
Secondary steering system	7-118
Engine valve adjustment (Note C)	7-118
Every 3600 hours	
Diesel Exhaust Fluid (DEF)/AdBlue® supply module filter	7 110
Dieser Extraust Fluid (DEI JIAGDIGE® Supply Module IIItel	1-119

Every 4000 hours or every four years  Engine coolant	7-122
As required	
Vehicle fire prevention	7-125
Track inspection and bolt torque	
Track rotation	
Track drive wheel and idler bolt torque	
Track tension release	
Track alignment	
Cab air filter*	
Grille screen and radiator area	
Transmission clutch and accumulator	
Tire pressure	
Fan belt	7-137
Diesel Exhaust Fluid (DEF)/AdBlue® tank	
Remote valve collection bottle	
Remote valve couplers	
Emergency brake lever	
Cab fabric and carpet	
Seat belt	
Fuse and relay locations	
Electrical component location	7-149
Lamps and bulbs	7-154
STORAGE	
Preparing for storage	
Removal from storage	
•	
ELECTRICAL SYSTEM	7 157
Radio or audio systemBattery removal and installation	
Auxiliary battery connections	
Headlight	
LED work lights	
Fender tail light and warning light	
Roof front warning and work light	
Roof rear warning light	
High intensity work light	
Side turn indicator light	
Rotating beacon light	
Number plate light	
Interior light	

## 8 TROUBLESHOOTING

ALARM(S)	
Display warnings overview	8-1
Display warnings - Level 1	
Display warnings - Level 2	
Display warnings - Level 3	
Display warnings - Level 4	
SYMPTOM(S)	
Engine symptoms	8-1
Transmission symptoms	
Hydraulic symptoms	
Hitch symptoms	
Brake symptoms	
Cab environment symptoms	
Electrical power system symptoms	
O CDECIFICATIONIC	
9 SPECIFICATIONS	0.4
Engine specifications	
Power train specifications	
Operating speeds - Wheeled tractors	
Operating speeds - Rowtrac™ tractors	
Vehicle dimensions and shipping weight - Wheeled tractors	
Vehicle dimensions and shipping weight - Rowtrac™ tractors Maximum operating weight	
Maximum operating weight	9-18
10 ACCESSORIES	
Farming system displays	
Rear view mirrors	
Chemical tank mounting	
General accessories	10-6

## 1 - GENERAL INFORMATION

#### Note to the owner

This manual contains important information about the safe operation, adjustment and routine maintenance of your **Magnum™** or **Magnum™** Rowtrac™ 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.

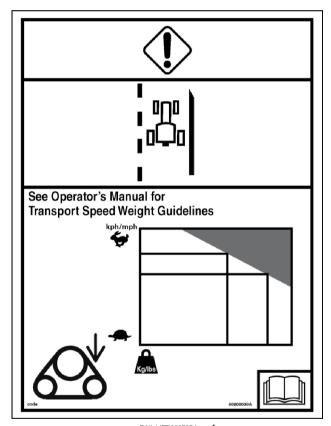
Do NOT operate or permit anyone to operate or service this machine until you or the other persons have read this manual. Use only trained operators who have demonstrated the ability to operate and service this machine correctly and safely.

#### Tractors equipped with rear tracks

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

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 CASE IH 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 CASE IH parts, your guarantee of quality and match.



RAIL14TR03870BA

## **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

Magnum™ or Magnum™ Rowtrac™ 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.

The tractor is not designed for front end loader operation.

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.



Our support email: ebooklibonline@outlook.com