

ORIGINAL INSTRUCTIONS

MAGNUM2654
MAGNUM3154
Tractor
PIN ZGRF05001 and above

OPERATOR'S MANUAL

CNH Industrial (Harbin) Machinery Co. Ltd.
No. 78 Songhua Road, Core District Hanan New Industry Zone,
Harbin City, Heilongjiang Province, P.R. China
+86 4008676600 (for customer in the areas other than Xinjiang Province)/
+86 4000991805 (for customer in Xinjiang Province)

Part number 48053588
1st edition English
September 2016



Contents

1 GENERAL INFORMATION

Note to the owner.....	1-1
Engine tampering.....	1-2
Tractor intended use.....	1-2
Electro-magnetic compatibility (EMC).....	1-3
ISOBUS certification.....	1-4
Product identification	1-5
Manual storage	1-7
Machine orientation.....	1-8
Component identification	1-9

2 SAFETY INFORMATION

Safety rules and signal word definitions	2-1
Safety rules - General	2-2
Safety rules - General maintenance safety	2-4
Safety rules - Wheels and tires	2-4
Safety rules - Driving on public roads and general transportation safety	2-4
Safety rules - Fire and explosion prevention	2-5
Safety rules - General battery safety	2-5
Safety rules - Hydraulic system safety	2-6
Safety rules - Instructional seat safety	2-6
Safety rules - Operator presence system	2-7
Safety rules - Power Take-Off (PTO)	2-7
Safety rules - Reflectors and warning lights	2-7
Safety rules - Seat belts	2-7
Safety rules - Roll Over Protective Structure (ROPS)	2-8
Safety rules - Cab protection	2-9
Safety rules - Air conditioning system	2-9
Safety rules - Personal Protective Equipment (PPE)	2-9
Safety rules - Do Not Operate tag	2-9
Safety rules - Hazardous chemicals	2-10
Safety rules - Utility safety	2-10
Safety rules - Electrical storm safety	2-10
Safety rules - Mounting and dismounting	2-10
Safety rules - Working at heights	2-11
Safety rules - Lifting and overhead loads	2-11
Safety rules - Implements, tools and trailers	2-11
Safety rules - Roll over and tip over	2-12
Ecology and the environment	2-13
Safety signs	2-14
Global warming potential	2-24

3 CONTROLS AND INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Tractor access.....	3-1
---------------------	-----

Lower step	3-3
OPERATOR'S SEAT	
Control identification	3-4
INSTRUCTOR'S SEAT	
Overview	3-8
FORWARD CONTROLS	
Steering column	3-9
Front console	3-12
Pedal controls	3-14
LEFT-HAND SIDE CONTROLS	
Pneumatic trailer brake	3-16
RIGHT-HAND SIDE CONTROLS	
Armrest console	3-17
Multi function handle	3-18
Control panel	3-22
Remote valve controls	3-31
Joystick	3-32
Armrest compartment	3-34
Adjusting the armrest console	3-36
REARWARD CONTROLS	
Fender console	3-37
Automatic temperature controls	3-40
Automatic temperature control system	3-43
Ventilation	3-44
OVERHEAD CONTROLS	
Interior lamps	3-46
EXTERIOR CONTROLS	
Rear fender	3-47
Front hitch	3-49
INSTRUMENT CLUSTER	
Overview	3-50
Gauges	3-51
Status and warning icons	3-52
Upper display	3-55
Keypad	3-57
Setup menu	3-59
Rear tire radius chart	3-65
Adjust menu	3-66
Performance features	3-75

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT

Engine - Safety rules	4-1
-----------------------------	-----

STARTING THE UNIT

Normal engine starting	4-4
Cold starting aids	4-7
Cold temperature operation	4-9

STOPPING THE UNIT

Stopping the engine	4-10
---------------------------	------

MOVING THE UNIT

FULL POWERSHIFT TRANSMISSION	4-11
Powershift transmission	4-11
Best practices for prolonged transmission life	4-12
Inching pedal and throttle	4-13
Powershift transmission controls	4-14
Upper display - Powershift transmission	4-17
Driving the Powershift vehicle	4-19
Setting default gears	4-24
Automatic Productivity Management (APM)	4-26
POWERSHIFT AND CVT TRANSMISSIONS	4-34
Mechanical Front Drive (MFD)	4-34
Differential lock system	4-37
Suspended axle	4-39
Ride control	4-44
Engine power boost	4-46
Constant engine speed	4-47
Suspended cab	4-49
Electronic end of row system	4-50

PARKING THE UNIT

Automatic park lock	4-56
---------------------------	------

5 TRANSPORT OPERATIONS

ROAD TRANSPORT

Tractor warning lamps and Slow Moving Vehicle (SMV) symbol	5-1
Wide transport marker light	5-2
Tractor warning lamps	5-4
Safe transport speed	5-5
Implement warning lamps and Slow Moving Vehicle (SMV) symbol	5-6
Safety chain	5-7

SHIPPING TRANSPORT

Securing the tractor for shipping	5-8
---	-----

RECOVERY TRANSPORT

Safety rules	5-9
Towing the tractor	5-10

6 WORKING OPERATIONS

GENERAL INFORMATION

Overview	6-1
----------------	-----

REAR POWER TAKE-OFF (PTO)

Safety rules	6-2
Connecting the Power Take-Off (PTO)	6-5
Interchangeable Power Take-Off (PTO) shaft	6-6
Rear Power Take-Off (PTO) operation	6-12
Power Take-Off (PTO) fender switch operation	6-16
Auto Power Take-Off (PTO) operation	6-17

FRONT POWER TAKE-OFF (PTO)

Overview	6-20
Front Power Take-Off (PTO) operation	6-21

REAR HITCH

Identification	6-24
Link adjustment	6-25
Hitch high clearance adjustment	6-29
Hydraulic links	6-32
Sway limiter adjustment	6-34
Lower link block adjustment	6-35
Mechanical float adjustment	6-37
Hitch quick coupler - Category III/IIIN	6-38
Hitch quick coupler - Category IVN	6-43
Hitch operation	6-48
Hitch remote switch operation	6-53
Position control operation	6-54
Load control operation	6-56
Slip control operation	6-58
Hitch set point	6-60

FRONT HITCH

Overview	6-62
Front hitch operation	6-63

DRAWBARS AND TOWING ATTACHMENTS

Safety rules	6-70
--------------------	------

Drawbar capacity/position	6-71
Adjusting the drawbar	6-75

TRAILER BRAKING SYSTEMS

Safety rules	6-77
Trailer brake connections	6-78
Air pressure monitoring	6-79

AUXILIARY CONNECTIONS

Auxiliary power and lighting	6-80
Cab power connections	6-82
Radar connection	6-83
Implement ISOBUS connector	6-84

HYDRAULIC REMOTE CONTROL VALVES

Valve couplers and connections	6-85
Motor return circuit	6-89
Power beyond circuit	6-90
Flow capacity	6-91
Hydraulic transport lock	6-92
Operating the controls	6-93
Remote valve display screens	6-97
Remote hydraulic auto mode	6-100
Auto depth control	6-103
Joystick operation	6-105

BALLASTING THE TRACTOR

Guidelines	6-110
Tire load and inflation charts	6-118
Weights, cast metal	6-132
Wheel slip and power hop performance	6-143

MECHANICAL FRONT DRIVE (MFD) AXLES

Front axle identification	6-146
Tire combinations and tread positions	6-147
Steering and oscillation stops	6-155
Tread and fender settings - Class 4.75 and 5.0 fixed front axles	6-157
Tread and fender settings - Class 4.75 and 5.0 saddle suspended front axles ..	6-167
Tread and fender settings - Class 5.0 wide front axles	6-176
Front wheel fenders	6-178
Front wheel fenders - Class 4.75 and 5.0 fixed and suspended axles	6-179
Front wheel fenders - Class 5.0 wide fixed and suspended axles	6-184
Wide tire fender kit	6-189

REAR AXLE

Rear wheel installation	6-195
Rear wheel tread settings	6-199

Dual/triple wheel setup for 508 mm (20 in)/559 mm (22 in) row spacing.....	6-207
Adjustable rear wheel	6-214

7 MAINTENANCE

GENERAL INFORMATION

Safety rules.....	7-1
Maintenance guidelines	7-2
Opening the hood	7-3
Closing the hood	7-4
Filling the fuel tank	7-5
Battery disconnect switch	7-7
Battery access and service.....	7-8
Tire and rim service.....	7-9
Tractor jacking points.....	7-11
Capacities	7-13
Consumables - Engine oil	7-14
Consumables - Transmission/hydraulic system fluid	7-15
Consumables - Diesel fuel	7-16
Consumables - Organic Acid Technology (OAT) coolant	7-17
Wear parts.....	7-19
Maintenance chart notes	7-21
Maintenance summary decal.....	7-22

Maintenance planning

Maintenance chart.....	7-23
------------------------	------

At warning message display

Air filter service icon/message*	7-25
Water in fuel message.....	7-28
Transmission oil filter switch.....	7-30
Hydraulic oil filter switch.....	7-33

First 10 to 50 hours

Wheel bolt torque.....	7-35
Weight bolt torque	7-36
Differential and planetary oil.....	7-37

Every 10 hours or daily

Engine oil level	7-38
Transmission oil level.....	7-39
Engine coolant level	7-40
Air reservoir.....	7-40
Rear hitch and front axle	7-40

Every 50 hours or weekly

Engine auxiliary fuel filter.....	7-41
-----------------------------------	------

First 100 hours

Powershift transmission clutch calibration.....	7-43
---	------

Every 100 hours

Front hitch	7-49
Front Power Take-Off (PTO) drive shaft.....	7-51
Input shaft for the front Power Take-Off (PTO) dropbox.....	7-52

Every 300 hours

Battery water level (Note B)	7-54
Engine air intake and exhaust hoses	7-56
Engine coolant level - deaeration tank	7-58
Weight bolt torque	7-59
Front axle (Note A)	7-60
Rear hitch (Note A)	7-62
Fuel tank.....	7-64
Differential and planetary oil level (Note B).....	7-65
Transmission oil pressure	7-66
Front Power Take-Off (PTO) oil level	7-67

Every 400 hours

Cab air filter*.....	7-68
----------------------	------

Every 600 hours

Engine oil and filter*	7-71
Engine coolant antifreeze protection	7-74
Engine coolant hoses and clamps.....	7-74
Engine fuel filter*	7-76
Engine auxiliary fuel filter*	7-79
Fuel system bleeding.....	7-81
Changeable Power Take-Off (PTO) internal splines.....	7-82
Engine air precleaner*.....	7-83

Every 1000 hours or annually

Pneumatic brake system dryer	7-84
Powershift transmission clutch calibration.....	7-85
Front Power Take-Off (PTO) oil and filter*.....	7-91
Front Power Take-Off (PTO) dropbox oil	7-93

Every 1200 hours or annually

Differential and planetary oil.....	7-94
Engine air filters*	7-98

Every 1500 hours

Transmission oil	7-101
Regulated system oil filter*	7-103
Main transmission oil filter*	7-104
Engine crankcase filter*	7-105

Every 3000 hours

Engine valve adjustment (Note C).....	7-109
---------------------------------------	-------

Every 4000 hours or every four years

Engine coolant.....	7-110
---------------------	-------

As required

Vehicle fire prevention	7-113
Cab air filter*	7-114
Grille screen and radiator area	7-117
Fuel tank vent filter	7-118
Transmission clutch and accumulator	7-118
Tire pressure	7-119
Fan belt	7-120
Remote valve collection bottle.....	7-126
Remote valve couplers	7-127
Cab fabric and carpet.....	7-128
Seat belt	7-128

Fuse and relay locations

Electrical component location	7-129
Lamps and bulbs	7-134

STORAGE

Preparing for storage	7-135
Removal from storage	7-136

ELECTRICAL SYSTEM

Radio or audio system.....	7-137
Battery removal and installation	7-138
Auxiliary battery connections	7-140
Headlight	7-141
LED work lights	7-142
Fender tail light and warning light	7-142
Roof front warning and work light	7-143
Roof rear warning light	7-144
High intensity work light	7-145
Wide transport marker light.....	7-146
Rotating beacon light	7-147
Interior light	7-148

8 TROUBLESHOOTING

ALARM(S)

Display warnings overview	8-1
Display warnings - Level 1	8-2
Display warnings - Level 2	8-4
Display warnings - Level 3	8-7
Display warnings - Level 4	8-8

SYMPTOM(S)

Engine symptoms	8-10
Transmission symptoms.....	8-12
Hydraulic symptoms	8-13
Hitch symptoms	8-14
Brake symptoms.....	8-15
Cab environment symptoms.....	8-15
Electrical power system symptoms.....	8-16

9 SPECIFICATIONS

Engine specifications	9-1
Power train specifications	9-2
Operating speeds - Wheeled tractors	9-5
Vehicle dimensions and shipping weight - Wheeled tractors.....	9-6
Maximum operating weight.....	9-9

10 ACCESSORIES

Farming system displays	10-1
Rear view mirrors.....	10-2
Chemical tank mounting.....	10-4
Loader connection and operation	10-6
General accessories.....	10-7

1 - GENERAL INFORMATION

Note to the owner

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

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.

Engine tampering

The fuel 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™ Magnum 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.

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.

Electro-magnetic compatibility (EMC)

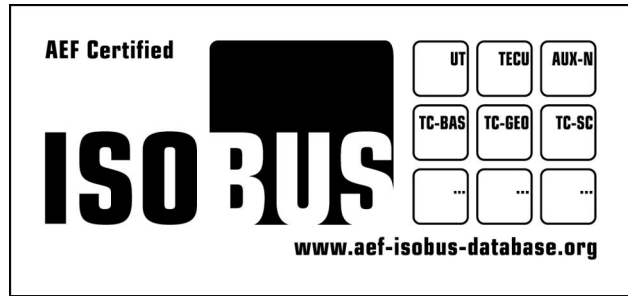
Interference may arise as a result of add-on equipment that may not necessarily meet the required standards. As such interference can result in serious malfunction of the unit and/or create unsafe situations, you must observe the following:

- The maximum power of emission equipment (radio, telephones, etc.) must not exceed the limits imposed by the national authorities of the country where you use the machine
- The electro-magnetic field generated by the add-on system should not exceed **24 V/m** at any time and at any location in the proximity of electronic components
- The add-on equipment must not interfere with the functioning of the on board electronics

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

ISOBUS certification

The Agricultural Industry Electronics Foundation (AEF) certified label indicates that various system components are in compliance with the ISOBUS 11783 standard. The software in your tractor ISOBUS control module – the Tractor Electronic Control Unit (TECU) – has been independently tested and received basic TECU certification.



RAIL14TR02690AA 1

Buy Now



Our support email:

ebooklibonline@outlook.com