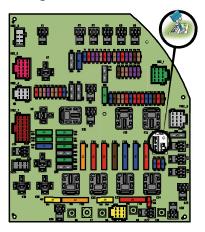
## **Workshop Service Manual**

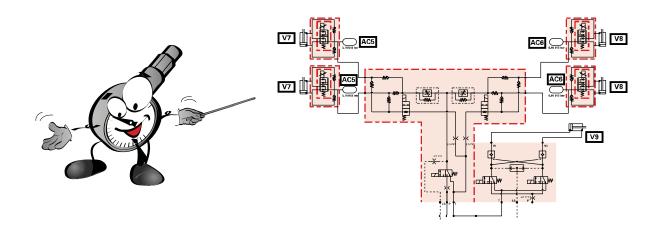
# Technician Service Book - MF 7600

GBA15	HA160
GBA25	ML130
GPA20	ML160
GPA40	
HA130	

#### Electrical and hydraulics diagrams









#### **Technician Service Book - MF 7600**

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## 1 - General

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# A - General specifications

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### 1 Model MF 7614 Dyna-4

Eng	yine
Brand	AGCO Power
Type	66 AWI - 4V
Nominal power (ISO TR14396) at 2100 rpm	130 hp (96 kW)
Maximum power (ISO TR14396) at 1950 rpm	140 hp (103 kW)
EPM (Engine Power Management): Maximum	155 hp (114 kW)
power (ISO TR14396) at 2100 rpm	
EPM: Maximum torque (ISO TR14396)	660 Nm
Idle speed, Power Control lever in neutral or main brakes engaged	700 rpm
Normal idle speed	1000 rpm
Nominal speed	2100 rpm
Maximum speed	2160 rpm
Engine weight	960 kg
Number of cylinders	6
Engine displacement in litres	6.6
Piston travel	120 mm
Piston diameter	108 mm
Compression ratio	17.4
Compression pressure	-
Injection pump brand	Bosch
Injection pump type	Common rail CP4.2
Firing order	1-5-3-6-2-4
Maximum pressure in the high-pressure system	1800 bar
Injector brand	Bosch
Injector type	CRIN3 / 8 holes
Charge pump type	Manual
Fuel prefilter filtration capacity	10 μ
Main fuel filter filtration capacity	5 μ
Low-pressure system pressure at minimum speed	0.5 bar - 8.5 bar
Low-pressure system pressure at maximum speed	0.5 bar - 8.5 bar
Recommended oil:	API CJ4 / ACEA E9
Maximum operating tilt (precautions)	20° roll 25° pitch
Oil/fuel consumption	Maximum 0.1%
Lubrication system	Gear pump at the bottom of the timing
Oil cooling system	Cooler integrated into the engine (left side)
Oil pressure at minimum speed	1.5 bar
Oil pressure at maximum speed	2.5 bar at 5 bar depending on the temperature
Relief valve adjustment pressure	5 bar (spring pressure)
Air suction type	Turbocharged with air/air intercooler
Air preheating type	Grid heater with relay controlled by the ECU
Number of valves	24 (4 per cylinder)
Valve clearance value	0.35 mm (inlet and exhaust)
Engine cooling system	Coolant



Engine	
Fan type	Viscostatic
Thermostat begins to open at	83°C
Liquid temperature from - to	-35°C to 106°C
Air compressor brand for the brake system	Knorr Bremse
Type of compressor	Pistons
Pressure range:	6.5 bar to 8 bar
Type and brand of air conditioning compressor	SD7H15 - Sanden
Air conditioning compressor displacement (cm <sup>3</sup> )	150
Refrigerant	R134a
Block preheater	110 or 220 volts
Fuel preheater	Options
Urea preheater	Coolant (tank) Electric (supply module and urea lines)
Exhaust fumes recirculation system	DOC (diesel oxidation catalyst) + SCR (selective catalytic reduction) systems
DOC (diesel oxidation catalyst) system	DOC (diesel oxidation catalyst) with metal substrate (exhaust fumes oxidation catalyst)
SCR system (AdBlue™ or DEF injection)	SCR with 2 ceramic substrates in silencer (exhaust fume treatment)
Safety system	NOx sensors at exhaust inlet and outlet
Device brand	Bosch Denox 2.2
Type of control	Engine controller EEM4
Tank strainer filtration capacity	70 μm
Main filter filtration capacity	20 μm
Filtration capacity of pump module inlet connector	100 μm
Urea solidification temperature	-11°C
Oil vapour recirculation system	Closed system breather (CCV)
Belt: air conditioning compressor/left-hand alternator/air compressor (2 dimensions: with or without air compressor)	Poly V 6 rib belt
Belt: fan/right-hand alternator/air compressor (2 dimensions: a different fan pulley is used depending on the power)	Poly V 10 rib belt

Rear axle transmission		
Gearbox type	GBA25	
Transmission type	Dyna-4	
Number of ratios	4	
Number of ranges	4	
Number of gears	16/16	
Creeper gears	4/1	
Number of gears with creeper gears	24/24	
Super creeper gears	14/1	
Number of gears with super creeper gears	32/32	
Maximum speed	40 kph	
Rear axle type	GPA23	
Number of pinion/ring gear teeth	8/39	





Rear axle transmission		
Rear axle ratio (crownwheel and pinion)	27.161	
4WD ratio	0.830	
Final drive type	Super Heavy Duty	
Final drive reduction ratio	(64+14)/14	
Maximum 4WD clutch torque	206 daNm	
Number of 4WD discs	6	
Main brake type	Disc	
Number of discs	1 per side	
Braking pressure	-	
Parking brake type	Hand brake	
Trailer brake type	Hydraulic and/or pneumatic with built-in antifreeze pump	
Pneumatic trailer braking pressure	6.5 bar to 8 bar	
Hydraulic trailer braking pressure	0 to 150 bar	
Maximum operating tilt - pitch (front/rear)	15° (> 15 kph) 22° (< or = 15 kph)	
Maximum operating tilt - roll (right/left)	15° (> 15 kph) 22° (< or = 15 kph)	
Maximum operating tilt - combined	15° (> 15 kph) 22° (< or = 15 kph)	
Transmission preheater	110 V and 240 V accessory kits	
Total loaded weight supported by rear axle - 40 kph	6900 kg	

Front axle		
Front axle brand	DANA	
Axle type	Fixed or suspended	
Supplier reference - fixed front axle	735/530	
Supplier reference - suspended front axle	735/613	
Rotational direction	Anti-clockwise	
Fixed front axle weight	347 kg	
Suspended front axle weight	587 kg	
Total loaded weight supported by front axle (maximum load on road)	5400 kg	
Recommended oil type (beam and final drive)	SAE85W90 (API GL4-MIL L-2105)	
Total ratio for fixed front axle	17.000	
Total ratio for suspended front axle	17.000	
Number of teeth on final drive	_	
Ratio for fixed axle final drive	6	
Ratio for suspended axle final drive	6	
Number of fixed axle pinion/ring gear teeth	12/34	
Number of suspended axle pinion/ring gear teeth	12/34	
Differential type	Multidisc	
Number of differential discs	12	
Maximum steering angle	55°	
Oscillation angle	± 9°	
Type of oscillation stop	Mechanical	



Front axle		
Steering ram diameter	68 mm x 32 mm	
Steering ram stroke	2 x 129 mm	
Suspension type	Hydraulics	
Suspension ram diameter	65 mm x 60 mm	
Suspension ram stroke	100 mm	
Hydraulic control unit brand	Husco	
Hydraulic control unit nominal pressure	200 bar	
Number of accumulators	2	
Accumulator pressure	Left-hand 0.5 I = 10 bar Right-hand 0.75 I = 50 bar	
Suspension sensor type	Angular potentiometer.	
Steering sensor type	Angular potentiometer.	
Brake type	Combined with the rear brake	
Factor K	1.326	

Floatrok	nydraulic
	•
System type	Open centre (OC) 57 I/min or 100 I/min Closed Centre Load Sensing (CCLS) 110 I/min
Flow rate	57 I/min or 100 I/min (OC) 110 I/min (CCLS)
High-pressure pump type	Bosch Rexroth gear pump(s) (OC) Bosch Rexroth piston pump (CCLS)
High-pressure pump displacement	19 cm3 (OC 57 l/min) 19 cm3 + 14 cm3 (OC 100 l/min) 45 cm3 (CCLS)
High-pressure pump rotational speed	2200 rpm
High-pressure pump maximum flow rate	57 I/min or 98 I/min (OC) 117 I/min (CCLS)
High-pressure pump maximum pressure	200 bar
Maximum quantity of oil to add for heavy implements	10 I
Maximum exportable oil quantity (without adding oil)	32
Maximum exportable oil quantity (adding oil)	42
Charge pump type	Suction (OC) Gear pump 71 cm3 (CCLS 110 l/min)
Main relief valve adjustment pressure	195 bar ± 5 bar (OC) 230 bar ± 5 bar (CCLS)
Number of spool valves (maximum)	4
Number of front "push-pull" connectors (maximum)	4
Number of rear "push-pull" connectors (maximum)	8
Maximum flow rate per spool valve	57 I/min or 98 I/min (OC) 100 I/min (CCLS)
Spool valve control type	Mechanical (OC) Electrohydraulic (CCLS)
Recommended oil:	According to MF CMS M 1145 specification



Steering	
Steering type	Hydrostatic
Type of control	Steering wheel
Steering unit displacement	160 cm3
Steering ram diameter	68 mm x 32 mm
Steering ram stroke	2 x 129 mm
Working pressure	175 bar ± 5 bar
Pressure relief valve adjustment pressure	175 bar ± 5 bar
Shock valve adjustment pressure	240 bar
Oil recommended for steering	According to MF CMS M1145 specification

Linkage	
Rear lift ram diameter	75 mm
Rear linkage travel	728 mm (CAT 2) 718 mm (CAT 3)
Maximum lifting capacity at ball joints (rear)	7100 kg
Operating pressure (rear)	180 bar
3-point linkage category (rear)	CAT 2 or CAT 3
Front lift ram diameter	80 mm (3.2 t) 90 mm (4 t)
Front linkage travel	684 mm (3.2 t) 750 mm (4 t)
Maximum lifting capacity at ball joints (front)	3200 kg or 4000 kg
Operating pressure (front)	180 bar
3-point linkage category (front)	CAT 2

Rear power take-off (PTO)	
Number of selections possible for rear PTO	540/1000 540/540E/1000/1000E with GSPTO option
Maximum permissible power 540/540E in 1"3/8 (6 and 21 splines)	540 = 74 kW 540E = 40 kW
Maximum permissible power 540/540E in 1"3/4 (20 splines)	540 = 74 kW 540E = 40 kW
Maximum permissible power 1000/1000E in 1"3/8 (6 and 21 splines)	1000 = 93 kW 1000E = 40 kW
Maximum permissible power 1000/1000E in 1"3/4 (20 splines)	1000 = 93 kW 1000E = 40 kW
Engine speed if PTO 540	1980 rpm
Engine speed if PTO 540E	1533 rpm
Engine speed if PTO 1000	2030 rpm
Engine speed if PTO 1000E	1572 rpm
Rotational direction	Clockwise
Clutch type	Multidisc hydraulic
Number of clutch discs	5
Control pressure	21 bar
Splined shaft type	6 or 21 in 1"3/8 or 20 in 1"3/4



Front power take-off	
Number of selections possible for front PTO	1000 rpm
Maximum permissible power - clockwise	100 kW
Maximum permissible power - anti-clockwise	110 kW
Maximum permissible torque - clockwise	497 Nm
Maximum permissible torque - anti-clockwise	549 Nm
Rotational direction	2 directions of rotation: Clockwise or anti-clockwise
Engine speed if PTO 1000	1920 rpm
Ratio	1.92
Clutch type	Multidisc hydraulic
Splined shaft type	6 or 21 in 1"3/8

Electric		
Battery brand	TAB	
Battery specifications (2 batteries)	12V 66 A/H	
Maximum current at start-up (IEC standard)	840 A	
Starter type	12 V	
Starter power	3.2 KW	
Alternator type	1 x 175 A or 2 x 120 A	
Current available on ISOBUS connector	50 A	
Hazard warning light unit	HELLA	
Interior light, left-hand door	2 x 5 W	
Roof light	-	
Type of bulb for side light indicators on hand rail	12 V 21 W / 12 V 10 W	
Type of bulb for brake lights, side lights on fenders	12 V 21 W / 12 V 5 W	
Type of bulb for main beams on lighting bar at front of bonnet	H4 - 12 V 60/55 W	
Type of bulb for dipped lights and side lights on lighting bar at front of bonnet	H7 - 12 V 55 W + T4 - 12 V 4 W	
Type of bulb for main beams on hand rail	H4 - 12 V 60/55 W	
Type of bulb for main beams on hand rail, low position	H3 - 12 V 55 W	
Type of bulb for work lights on hand rail	H3 - 12 V 55 W	
Type of bulb for work lights on roof	H3 - 12 V 55 W	
Type of bulb for work lights on step	-	
Type of bulb for number plate lights on roof	H3 - 12 V 55 W	
Type of bulb for reversing lights	12 V 21 W	
Type of bulb for rotary beacon	H1 - 12 V 55 W	

Electronics	
Function of each controller	
DCC3	Instrument panel
EXT Lite	-
CAN levers and armrest	-



Electronics	
AUTOTRONIC 5 DC	3 Autotronic 5 DC:  - 1 for linkage
	- 1 for transmission
	<ul> <li>1 TECU (without VIN code) suspended front axle</li> </ul>
SB23 valves	-
Lights module	Linkage/rear electrohydraulic power take-off/user lights interface
Lighting controller	-
EEM4 (ECM Tier 4 AGCO Power)	Engine/Denoxtronic module
NOx ECU	2 NOx ECU: converters of NOx sensor signals to EEM4 via CAN
Danfoss Orbitrol valve	-
TopDock aerial	-
Datatronic CCD	-
Automatic air conditioning module	-
CAN switches key pad	-
LIN switches key pad	Controls for:  — main lighting
	– 4WD front axle, manual and automatic
	– manual and automatic differential lock
	- front axle suspension
AM50 unit	AgCommand™

Cab and fittings	
Type of cab suspension available	Mechanical, 2 points at rear
Type of rear-view mirror control available	Manual
Type of air conditioning control available	Manual
Type and brand of air conditioning compressor	SANDEN with axial pistons
Compressor displacement	154.9 cm3/rev.
Refrigerant	R134a
Noise level in cab with doors closed	70 dBA
Roof type	Standard or with hatch or high visibility



#### 2 Model MF 7615 Dyna-4

Engine	
Brand	AGCO Power
Туре	66 AWI - 4V
Nominal power (ISO TR14396) at 2100 rpm	140 hp (103 kW)
Maximum power (ISO TR14396) at 1950 rpm	150 hp (110 kW)
EPM (Engine Power Management): Maximum	165 hp (121 kW)
power (ISO TR14396) at 2100 rpm	
EPM: Maximum torque (ISO TR14396)	677 Nm
Idle speed, Power Control lever in neutral or main brakes engaged	700 rpm
Normal idle speed	1000 rpm
Nominal speed	2100 rpm
Maximum speed	2160 rpm
Engine weight	960 kg
Number of cylinders	6
Engine displacement in litres	6.6
Piston travel	120 mm
Piston diameter	108 mm
Compression ratio	17.4
Compression pressure	-
Injection pump brand	Bosch
Injection pump type	Common rail CP4.2
Firing order	1-5-3-6-2-4
Maximum pressure in the high-pressure system	1800 bar
Injector brand	Bosch
Injector type	CRIN3 / 8 holes
Charge pump type	Manual
Fuel prefilter filtration capacity	10 μ
Main fuel filter filtration capacity	5 μ
Low-pressure system pressure at minimum speed	0.5 bar - 8.5 bar
Low-pressure system pressure at maximum speed	0.5 bar - 8.5 bar
Recommended oil:	API CJ4 / ACEA E9
Maximum operating tilt (precautions)	20° roll 25° pitch
Oil/fuel consumption	Maximum 0.1%
Lubrication system	Gear pump at the bottom of the timing
Oil cooling system	Cooler integrated into the engine (left side)
Oil pressure at minimum speed	1.5 bar
Oil pressure at maximum speed	2.5 bar at 5 bar depending on the temperature
Relief valve adjustment pressure	5 bar (spring pressure)
Air suction type	Turbocharged with air/air intercooler
Air preheating type	Grid heater with relay controlled by the ECU
Number of valves	24 (4 per cylinder)
Valve clearance value	0.35 mm (inlet and exhaust)
Engine cooling system	Coolant



Engine	
Fan type	Viscostatic
Thermostat begins to open at	83°C
Liquid temperature from - to	-35°C to 106°C
Air compressor brand for the brake system	Knorr Bremse
Type of compressor	Pistons
Pressure range:	6.5 bar to 8 bar
Type and brand of air conditioning compressor	SD7H15 - Sanden
Air conditioning compressor displacement (cm <sup>3</sup> )	150
Refrigerant	R134a
Block preheater	110 or 220 volts
Fuel preheater	Options
Urea preheater	Coolant (tank) Electric (supply module and urea lines)
Exhaust fumes recirculation system	DOC (diesel oxidation catalyst) + SCR (selective catalytic reduction) systems
DOC (diesel oxidation catalyst) system	DOC (diesel oxidation catalyst) with metal substrate (exhaust fumes oxidation catalyst)
SCR system (AdBlue™ or DEF injection)	SCR with 2 ceramic substrates in silencer (exhaust fume treatment)
Safety system	NOx sensors at exhaust inlet and outlet
Device brand	Bosch Denox 2.2
Type of control	Engine controller EEM4
Tank strainer filtration capacity	70 μm
Main filter filtration capacity	20 μm
Filtration capacity of pump module inlet connector	100 μm
Urea solidification temperature	-11°C
Oil vapour recirculation system	Closed system breather (CCV)
Belt: air conditioning compressor/left-hand alternator/air compressor (2 dimensions: with or without air compressor)	Poly V 6 rib belt
Belt: fan/right-hand alternator/air compressor (2 dimensions: a different fan pulley is used depending on the power)	Poly V 10 rib belt

Rear axle transmission	
Gearbox type	GBA25
Transmission type	Dyna-4
Number of ratios	4
Number of ranges	4
Number of gears	16/16
Creeper gears	4/1
Number of gears with creeper gears	24/24
Super creeper gears	14/1
Number of gears with super creeper gears	32/32
Maximum speed	40 kph
Rear axle type	GPA23
Number of pinion/ring gear teeth	8/39



Rear axle transmission	
Rear axle ratio (crownwheel and pinion)	27.161
4WD ratio	0.830
Final drive type	Super Heavy Duty
Final drive reduction ratio	(64+14)/14
Maximum 4WD clutch torque	206 daNm
Number of 4WD discs	6
Main brake type	Disc
Number of discs	1 per side
Braking pressure	-
Parking brake type	Hand brake
Trailer brake type	Hydraulic and/or pneumatic with built-in antifreeze pump
Pneumatic trailer braking pressure	6.5 bar to 8 bar
Hydraulic trailer braking pressure	0 to 150 bar
Maximum operating tilt - pitch (front/rear)	15° (> 15 kph) 22° (< or = 15 kph)
Maximum operating tilt - roll (right/left)	15° (> 15 kph) 22° (< or = 15 kph)
Maximum operating tilt - combined	15° (> 15 kph) 22° (< or = 15 kph)
Transmission preheater	110 V and 240 V accessory kits
Total loaded weight supported by rear axle - 40 kph	6900 kg

Front axle	
Front axle brand	DANA
Axle type	Fixed or suspended
Supplier reference - fixed front axle	740/553
Supplier reference - suspended front axle	740/614
Rotational direction	Anti-clockwise
Fixed front axle weight	380 kg
Suspended front axle weight	620 kg
Total loaded weight supported by front axle (maximum load on road)	5400 kg
Recommended oil type (beam and final drive)	SAE85W90 (API GL4-MIL L-2105)
Total ratio for fixed front axle	17.000
Total ratio for suspended front axle	17.000
Number of teeth on final drive	_
Ratio for fixed axle final drive	6
Ratio for suspended axle final drive	6
Number of fixed axle pinion/ring gear teeth	12/34
Number of suspended axle pinion/ring gear teeth	12/34
Differential type	Multidisc
Number of differential discs	12
Maximum steering angle	55°
Oscillation angle	± 9°
Type of oscillation stop	Mechanical



Front axle		
Steering ram diameter	72 mm x 38 mm	
Steering ram stroke	2 x 128 mm	
Suspension type	Hydraulics	
Suspension ram diameter	65 mm x 60 mm	
Suspension ram stroke	100 mm	
Hydraulic control unit brand	Husco	
Hydraulic control unit nominal pressure	200 bar	
Number of accumulators	2	
Accumulator pressure	Left-hand 0.5 I = 10 bar Right-hand 0.75 I = 50 bar	
Suspension sensor type	Angular potentiometer.	
Steering sensor type	Angular potentiometer.	
Brake type	Combined with the rear brake	
Factor K	1.326	

Electrohydraulic	
System type	Open centre (OC) 57 I/min or 100 I/min Closed Centre Load Sensing (CCLS) 110 I/min
Flow rate	57 I/min or 100 I/min (OC) 110 I/min (CCLS)
High-pressure pump type	Bosch Rexroth gear pump(s) (OC) Bosch Rexroth piston pump (CCLS)
High-pressure pump displacement	19 cm3 (OC 57 l/min) 19 cm3 + 14 cm3 (OC 100 l/min) 45 cm3 (CCLS)
High-pressure pump rotational speed	2200 rpm
High-pressure pump maximum flow rate	57 I/min or 98 I/min (OC) 117 I/min (CCLS)
High-pressure pump maximum pressure	200 bar
Maximum quantity of oil to add for heavy implements	10 I
Maximum exportable oil quantity (without adding oil)	32 I
Maximum exportable oil quantity (adding oil)	42 l
Charge pump type	Suction (OC) Gear pump 71 cm3 (CCLS 110 I/min)
Main relief valve adjustment pressure	195 bar ± 5 bar (OC) 230 bar ± 5 bar (CCLS)
Number of spool valves (maximum)	4
Number of front "push-pull" connectors (maximum)	4
Number of rear "push-pull" connectors (maximum)	8
Maximum flow rate per spool valve	57 I/min or 98 I/min (OC) 100 I/min (CCLS)
Spool valve control type	Mechanical (OC) Electrohydraulic (CCLS)
Recommended oil:	According to MF CMS M 1145 specification



Steering	
Steering type	Hydrostatic
Type of control	Steering wheel
Steering unit displacement	160 cm3
Steering ram diameter	72 mm x 38 mm
Steering ram stroke	2 x 128 mm
Working pressure	175 bar ± 5 bar
Pressure relief valve adjustment pressure	175 bar ± 5 bar
Shock valve adjustment pressure	240 bar
Oil recommended for steering	According to MF CMS M1145 specification

Linkage	
Rear lift ram diameter	75 mm
Rear linkage travel	728 mm (CAT 2) 718 mm (CAT 3)
Maximum lifting capacity at ball joints (rear)	7100 kg
Operating pressure (rear)	180 bar
3-point linkage category (rear)	CAT 2 or CAT 3
Front lift ram diameter	80 mm (3.2 t) 90 mm (4 t)
Front linkage travel	684 mm (3.2 t) 750 mm (4 t)
Maximum lifting capacity at ball joints (front)	3200 kg or 4000 kg
Operating pressure (front)	180 bar
3-point linkage category (front)	CAT 2

Rear power take-off (PTO)	
Number of selections possible for rear PTO	540/1000 540/540E/1000/1000E with GSPTO option
Maximum permissible power 540/540E in 1"3/8 (6 and 21 splines)	540 = 74 kW 540E = 40 kW
Maximum permissible power 540/540E in 1"3/4 (20 splines)	540 = 74 kW 540E = 40 kW
Maximum permissible power 1000/1000E in 1"3/8 (6 and 21 splines)	1000 = 93 kVV 1000E = 40 kVV
Maximum permissible power 1000/1000E in 1"3/4 (20 splines)	1000 = 93 kW 1000E = 40 kW
Engine speed if PTO 540	1980 rpm
Engine speed if PTO 540E	1533 rpm
Engine speed if PTO 1000	2030 rpm
Engine speed if PTO 1000E	1572 rpm
Rotational direction	Clockwise
Clutch type	Multidisc hydraulic
Number of clutch discs	5
Control pressure	21 bar
Splined shaft type	6 or 21 in 1"3/8 or 20 in 1"3/4



Front power take-off	
Number of selections possible for front PTO	1000 rpm
Maximum permissible power - clockwise	100 kW
Maximum permissible power - anti-clockwise	110 kW
Maximum permissible torque - clockwise	497 Nm
Maximum permissible torque - anti-clockwise	549 Nm
Rotational direction	2 directions of rotation: Clockwise or anti-clockwise
Engine speed if PTO 1000	1920 rpm
Ratio	1.92
Clutch type	Multidisc hydraulic
Splined shaft type	6 or 21 in 1"3/8

Electric		
Battery brand	TAB	
Battery specifications (2 batteries)	12V 66 A/H	
Maximum current at start-up (IEC standard)	840 A	
Starter type	12 V	
Starter power	3.2 KW	
Alternator type	1 x 175 A or 2 x 120 A	
Current available on ISOBUS connector	50 A	
Hazard warning light unit	HELLA	
Interior light, left-hand door	2 x 5 W	
Roof light	-	
Type of bulb for side light indicators on hand rail	12 V 21 W / 12 V 10 W	
Type of bulb for brake lights, side lights on fenders	12 V 21 W / 12 V 5 W	
Type of bulb for main beams on lighting bar at front of bonnet	H4 - 12 V 60/55 W	
Type of bulb for dipped lights and side lights on lighting bar at front of bonnet	H7 - 12 V 55 W + T4 - 12 V 4 W	
Type of bulb for main beams on hand rail	H4 - 12 V 60/55 W	
Type of bulb for main beams on hand rail, low position	H3 - 12 V 55 W	
Type of bulb for work lights on hand rail	H3 - 12 V 55 W	
Type of bulb for work lights on roof	H3 - 12 V 55 W	
Type of bulb for work lights on step	-	
Type of bulb for number plate lights on roof	H3 - 12 V 55 W	
Type of bulb for reversing lights	12 V 21 W	
Type of bulb for rotary beacon	H1 - 12 V 55 W	

Electronics	
Function of each controller	
DCC3	Instrument panel
EXT Lite	-
CAN levers and armrest	-



Elect	ronics
AUTOTRONIC 5 DC	3 Autotronic 5 DC:  – 1 for linkage
	– 1 for transmission
	<ul> <li>1 TECU (without VIN code) suspended front axle</li> </ul>
SB23 valves	-
Lights module	Linkage/rear electrohydraulic power take-off/user lights interface
Lighting controller	-
EEM4 (ECM Tier 4 AGCO Power)	Engine/Denoxtronic module
NOx ECU	2 NOx ECU: converters of NOx sensor signals to EEM4 via CAN
Danfoss Orbitrol valve	-
TopDock aerial	-
Datatronic CCD	-
Automatic air conditioning module	-
CAN switches key pad	-
LIN switches key pad	Controls for:  — main lighting
	- 4WD front axle, manual and automatic
	– manual and automatic differential lock
	<ul> <li>front axle suspension</li> </ul>
AM50 unit	AgCommand™

Cab and fittings	
Type of cab suspension available	Mechanical, 2 points at rear
Type of rear-view mirror control available	Manual
Type of air conditioning control available	Manual
Type and brand of air conditioning compressor	SANDEN with axial pistons
Compressor displacement	154.9 cm3/rev.
Refrigerant	R134a
Noise level in cab with doors closed	70 dBA
Roof type	Standard or with hatch or high visibility



### 3 Model MF 7615 Dyna-6

Brand AGCO Power Type 66 AWI - 4V Nominal power (ISO TR14396) at 2100 rpm 140 hp (103 kW) Maximum power (ISO TR14396) at 1950 rpm 175 hp (103 kW) EPM (Engine Power Management): Maximum power (ISO TR14396) at 2100 rpm 175 hp (129 kW) EPM: Maximum torque (ISO TR14396) 745 hm Idle speed, Power Control lever in neutral or main brakes engaged Normal idle speed 1000 rpm Normal idle speed 2100 rpm Maximum speed 2100 rpm Maximum speed 2100 rpm Maximum speed 2100 rpm Maximum speed 1000 rpm Maximum speed 1000 rpm Maximum speed 1000 rpm Maximum speed 1174	Eng	Engine	
Type			
Nominal power (ISO TR14396) at 2100 rpm Maximum power (ISO TR14396) at 1950 rpm  EPM (Engine Power Management): Maximum power (ISO TR14396) at 2100 rpm  EPM: Maximum torque (ISO TR14396) Idle speed, Power Control lever in neutral or main pinkes engaged Normal idle speed Normal			
Maximum power (ISO TR14396) at 1950 rpm       150 hp (110 kW)         EPM (Engine Power Management): Meximum power (ISO TR14396) at 2100 rpm       175 hp (129 kW)         EPM: Maximum torque (ISO TR14396)       745 Nm         Idle speed. Power Control lever in neutral or main brakes engaged       1000 rpm         Normal Idle speed       1000 rpm         Normal Idle speed       2160 rpm         Ingine weight       960 kg         Number of cylinders       6         Engine weight       960 kg         Number of cylinders       6         Engine displacement in litres       6.6         Piston travel       120 mm         Piston diameter       108 mm         Compression pressure       -         Injection pump brand       Bosch         Injection pump type       Common rail CP4.2         Firing order       1-5-3-6-2-4         Maximum pressure in the high-pressure system       Bosch         Injector brand       Bosch         Injector type       CRIN3 / 8 holes         Charge pump type       Manual         Fuel prefiber filtration capacity       10 μ         Main fuel filter filtration capacity       5 μ         Low-pressure system pressure at maximum speed       0.5 bar - 8.5 bar <td>- 11</td> <td></td>	- 11		
EPM (Engine Power Management): Maximum power (ISO TR14396) at 2100 rpm  Idle speed, Power Control lever in neutral or main brakes engaged  Normal idle speed  Normal idle speed  Normal speed  Normal speed  Maximum speed  2160 rpm  Engine weight  Normal speed  Normal speed  Maximum speed  Engine displacement in litres  6.6  Piston travel  Piston diameter  Compression ratio  Compression ratio  Injection pump brand  Injection pump type  Firing order  Maximum pressure in the high-pressure system  Injector brand  Injector brand  Rege pump type  Charge pump type  Charge pump type  Charge pump type  Main fuel filter filtration capacity  Main fuel filter filtration capacity  Maximum poreating tilt (precautions)  Recommended oil:  Maximum operating tilt (precautions)  API CLAI / ACEA E9  Maximum operating tilt (precautions)  Coll pressure at maximum speed  Oil pressure at maximum speed  Oil pressure at minimum speed  Oil pressure at minimum speed  Oil pressure at minimum speed  Injector integrated into the engine (left side)  Oil pressure at minimum speed  Oil pressure at minimu		·	
Dower (IŠO TR14396) at 2100 rpm	·	1	
Idle speed, Power Control lever in neutral or main brakes engaged  Normal idle speed  1000 rpm  Normal idle speed  2100 rpm  Maximum speed  2160 rpm  Engine weight  960 kg  Number of cylinders  6 Engine displacement in litres  6.6 Piston travel  120 mm  Piston diameter  108 mm  Compression ratio  17.4  Compression pressure  - Injection pump brand  Injection pump type  Common rell CP4.2  Firing order  Maximum pressure in the high-pressure system  Injector brand  Injector type  CRIN3 / 8 holes  Charge pump type  Fuel prefilter filtration capacity  Low-pressure system pressure at minimum speed  Low-pressure system pressure at minimum speed  Low-pressure system pressure at maximum speed  Low-pressure system  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil fuel consumption  Maximum speed  Als Dat A CEA E9  Maximum of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  It place of the timing  Oil pressure at minimum speed  Als Dat A CEA E9  Maximum operating tilt (precautions)  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  Als Dat A CEA E9  Maximum operating tilt (precautions)  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  Als part at 5 bar depending on the temperature  Selfe' valve adjustment pressure  Selfe' valve adjustment pressure  Furbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value	power (ISO TR14396) at 2100 rpm	·	
brakes engaged         1000 rpm           Normal idle speed         2100 rpm           Maximum speed         2160 rpm           Engine weight         960 kg           Number of cylinders         6           Engine displacement in litres         6.6           Piston travel         120 mm           Piston travel         108 mm           Compression ratio         17,4           Compression pressure         -           Injection pump brand         Bosch           Injection pump type         Common rail CP4.2           Firing order         1-5-3-6-2-4           Maximum pressure in the high-pressure system         1800 bar           Injector brand         Bosch           Injector type         CRINA / 8 holes           Charge pump type         Manual           Fuel prefilter filtration capacity         10 μ           Main fuel filter filtration capacity         5 μ           Low-pressure system pressure at maximum speed         0.5 bar - 8.5 bar           Low-pressure system pressure at maximum speed         0.5 bar - 8.5 bar           Recommended oil:         API CJ4 / ACEA E9           Maximum operating tilt (precautions)         20° roll           20° roll         25° pitch		745 Nm	
Nominal speed   2100 rpm   Maximum speed   2160 rpm   2160 rpm   2160 rpm   2060 kg   Number of cylinders   6   6   6   6   6   6   6   6   6		700 rpm	
Engine weight 960 kg Number of cylinders 6 Engine displacement in litres 66 Fiston travel Piston travel 120 mm Piston diameter 108 mm Compression ratio 17.4 Compression pressure Injection pump brand Bosch Injection pump brand Injection pump type Common rail CP4.2 Firing order Maximum pressure in the high-pressure system Injector brand Bosch Injector brand Injector type CRIN3 / 8 holes Charge pump type Main fuel filter filtration capacity Main fuel filter filtration capacity  Low-pressure system pressure at minimum speed Low-pressure system pressure at maximum speed Recommended oil: Maximum operating tilt (precautions) 20° roll 25° pitch Oil/fuel consumption Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at minimum speed Air suction type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves Valve clearance value  0.35 mm (inlet and exhaust)	Normal idle speed	1000 rpm	
Engine weight 960 kg  Number of cylinders 6  Engine displacement in litres 6.6  Piston travel 120 mm  Piston diameter 108 mm  Compression pressure - Injection pump brand Bosch Injection pump type Common rail CP4.2  Firing order 1-5-3-6-2-4  Maximum pressure in the high-pressure system 1800 bar Injector brand Bosch Injector brand Bosch Injector type CRIN3 / 8 holes  Charge pump type Manual  Fuel prefilter filtration capacity 10 µ  Main fuel filter filtration capacity 5 µ  Low-pressure system pressure at maximum speed 0.5 bar - 8.5 bar  Recommended oil: API CJA / ACEA E9  Maximum operating tilt (precautions) 20° roll  Lubrication system Gear pump at the bottom of the timing 0il cooling system Cooler integrated into the engine (left side) 0il pressure at minimum speed 1.5 bar  Air suction type 1.5 bar (2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure 5 ber (spring pressure)  Air suction type 7.5 bar (and the information of the timing 0.1 pressure at minimum speed 1.5 bar 1.5 bar 0.1 pressure at minimum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure 5 ber (spring pressure)  Air suction type 7.5 bar (and the arith relay controlled by the ECU 1.5 bar 0.35 mm (inlet and exhaust)	Nominal speed	2100 rpm	
Number of cylinders  Engine displacement in litres  Engine displacement in litres  Engine displacement in litres  6.6  Piston travel  Piston diameter  108 mm  Compression pressure  Injection pump brand  Injection pump type  Common rail CP4.2  Firing order  I-5-3-6-2-4  Maximum pressure in the high-pressure system  Injector brand  Injector type  CRIN3 / 8 holes  Charge pump type  Fuel prefilter filtration capacity  Low-pressure system pressure at minimum speed  Low-pressure system pressure at maximum speed  Recommended oil:  Maximum operating tilt (precautions)  20° roll  20° roll  25° pitch  Oil fressure at minimum speed  1.5 bar  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Valve clearance value  O.35 mm (inlet and exhaust)	Maximum speed	2160 rpm	
Engine displacement in litres 6.6  Piston travel 120 mm  Piston diameter 108 mm  Compression pressure - Injection pump brand Bosch Injection pump type Common rail CP4.2  Firing order 1-5-3-6-2-4  Maximum pressure in the high-pressure system 1800 bar Injector brand Bosch Injector type CRIN3 / 8 holes  Charge pump type Manual  Fuel prefilter filtration capacity 10 μ  Main fuel filter filtration capacity 5 μ  Low-pressure system pressure at minimum speed 0.5 bar - 8.5 bar  Recommended oil: API CJ4 / ACEA E9  Maximum operating tilt (precautions) 20° roll 25° pitch  Oil fuel consumption Maximum 0.1%  Lubrication system Cooler integrated into the engine (left side)  Oil pressure at maximum speed 1.5 bar  Cooler integrated into the engine (left side)  Oil pressure at maximum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure 5 bar (spring pressure)  Air suction type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU  Number of valves 44 (4 per cylinder)  Valve clearance value	Engine weight	960 kg	
Piston travel 120 mm  Piston diameter 108 mm  Compression pressure - Injection pump brand Bosch Injection pump brand Bosch Injection pump type Common rail CP4.2  Firing order 1-5-3-6-2-4  Maximum pressure in the high-pressure system 1800 bar Injector brand Bosch Injector type CRIN3 / 8 holes  Charge pump type CRIN3 / 8 holes  Charge pump type Main fuel filter filtration capacity 10 μ  Main fuel filter filtration capacity 5 μ  Low-pressure system pressure at minimum speed 0.5 bar - 8.5 bar  Low-pressure system pressure at maximum speed 0.5 bar - 8.5 bar  Recommended oil: API CJ4 / ACEA E9  Maximum operating tilt (precautions) 20° roll 25° pitch  Oil/fuel consumption Maximum 0.1%  Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at minimum speed 1.5 bar  Oil pressure at minimum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure 5 bar (spring pressure)  Air suction type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves 24 (4 per cylinder)  Valve clearance value 0.35 mm (inlet and exhaust)	Number of cylinders	6	
Piston diameter       108 mm         Compression ratio       17.4         Compression pressure       -         Injection pump brand       Bosch         Injection pump type       Common rail CP4.2         Firing order       1-5-3-6-2-4         Maximum pressure in the high-pressure system       1800 bar         Injector brand       Bosch         Injector type       CRIN3 / 8 holes         Charge pump type       Manual         Fuel prefilter filtration capacity       5 μ         Low-pressure system pressure at minimum speed       0.5 bar - 8.5 bar         Low-pressure system pressure at maximum speed       0.5 bar - 8.5 bar         Recommended oil:       API CJ4 / ACEA E9         Maximum operating tilt (precautions)       20° roll         25° pitch       25° pitch         Oil/fuel consumption       Maximum 0.1%         Lubrication system       Gear pump at the bottom of the timing         Oil cooling system       Cooler integrated into the engine (left side)         Oil pressure at minimum speed       1.5 bar         Oil pressure at minimum speed       2.5 bar at 5 bar depending on the temperature         Relief valve adjustment pressure       5 bar (spring pressure)         Air suction type       Turbocharged with air	Engine displacement in litres	6.6	
Compression ratio Compression pressure Injection pump brand Bosch Injection pump type Common rail CP4.2 Firing order 1-5-3-6-2-4 Maximum pressure in the high-pressure system Injector brand Bosch Injector type CRIN3 / 8 holes Charge pump type Manual Fuel prefilter filtration capacity Iowpressure system pressure at minimum speed Low-pressure system pressure at maximum speed Low-pressure system pressure at maximum speed Recommended oil: API CJ4 / ACEA E9 Maximum operating tilt (precautions) Voll/fuel consumption Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at maximum speed Air suction type Turbocharged with air/air intercooler Air preheating type Valve clearance value O.35 mm (inlet and exhaust)	Piston travel	120 mm	
Compression pressure Injection pump brand Bosch Injection pump type Common rail CP4.2 Firing order 1-5-3-6-2-4 Maximum pressure in the high-pressure system Injector brand Bosch Injector brand Bosch Injector type CRIN3 / 8 holes Charge pump type Manual Fuel prefilter filtration capacity Io μ Main fuel filter filtration capacity  Low-pressure system pressure at minimum speed Low-pressure system pressure at maximum speed Injector type CRIN3 / 8 holes Charge pump type Manual Fuel prefilter filtration capacity Io μ Main fuel filter filtration capacity Io μ  Low-pressure system pressure at maximum speed Io-5 bar - 8.5 bar Recommended oil: API CJ4 / ACEA E9  Maximum operating tilt (precautions) 20° roll 25° pitch Oil/fuel consumption Maximum 0.1% Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at minimum speed I.5 bar Oil pressure at minimum speed I.5 bar Oil pressure at maximum speed Io bar at 5 bar depending on the temperature Relief valve adjustment pressure Firm preheating type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves Valve clearance value	Piston diameter	108 mm	
Injection pump brand Injection pump type Common rail CP4.2 Firing order 1-5-3-6-2-4 Maximum pressure in the high-pressure system Injector brand Injector brand Injector type CRIN3 / 8 holes Charge pump type Manual Fuel prefilter filtration capacity Io μ Main fuel filter filtration capacity Low-pressure system pressure at minimum speed Low-pressure system pressure at maximum speed Low-pressure system pressure at maximum speed Recommended oil: API CJ4 / ACEA E9 Maximum operating tilt (precautions) 20° roll 25° pitch Oil/fuel consumption Maximum 0.1% Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at maximum speed 1.5 bar Oil pressure at maximum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure 5 bar (spring pressure) Air suction type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves Valve clearance value  O.35 mm (inlet and exhaust)	Compression ratio	17.4	
Injection pump type Common rail CP4.2  Firing order 1-5-3-6-2-4  Maximum pressure in the high-pressure system Injector brand Injector type CRIN3 / 8 holes Charge pump type Main fuel filter filtration capacity Low-pressure system pressure at minimum speed Low-pressure system pressure at maximum speed Recommended oil: API CJ4 / ACEA E9  Maximum operating tilt (precautions) 20° roll 25° pitch Oil/fuel consumption Maximum 0.1 % Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at maximum speed 1.5 bar Oil pressure at maximum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure Air suction type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves Valve clearance value O.35 mm (inlet and exhaust)	Compression pressure	-	
Firing order  Maximum pressure in the high-pressure system  1800 bar  Injector brand  Rosch  Injector type  CRIN3 / 8 holes  Charge pump type  Manual  Fuel prefilter filtration capacity  Main fuel filter filtration capacity  Low-pressure system pressure at minimum speed  Low-pressure system pressure at maximum speed  Low-pressure system pressure at maximum speed  Recommended oil:  API CJ4 / ACEA E9  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Maximum 0.1%  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at maximum speed  1.5 bar  Oil pressure at minimum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  5 bar (spring pressure)  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value	Injection pump brand	Bosch	
Maximum pressure in the high-pressure system       1800 bar         Injector brand       Bosch         Injector type       CRIN3 / 8 holes         Charge pump type       Manual         Fuel prefilter filtration capacity       10 μ         Main fuel filter filtration capacity       5 μ         Low-pressure system pressure at minimum speed       0.5 bar - 8.5 bar         Low-pressure system pressure at maximum speed       0.5 bar - 8.5 bar         Recommended oil:       API CJ4 / ACEA E9         Maximum operating tilt (precautions)       20° roll 25° pitch         Oil/fuel consumption       Maximum 0.1%         Lubrication system       Gear pump at the bottom of the timing         Oil cooling system       Cooler integrated into the engine (left side)         Oil pressure at minimum speed       1.5 bar         Oil pressure at maximum speed       2.5 bar at 5 bar depending on the temperature         Relief valve adjustment pressure       5 bar (spring pressure)         Air suction type       Turbocharged with air/air intercooler         Air preheating type       Grid heater with relay controlled by the ECU         Number of valves       24 (4 per cylinder)         Valve clearance value       0.35 mm (inlet and exhaust)	Injection pump type	Common rail CP4.2	
Injector brand Injector type CRIN3 / 8 holes Charge pump type Manual Fuel prefilter filtration capacity 10 μ Main fuel filter filtration capacity 5 μ Low-pressure system pressure at minimum speed Low-pressure system pressure at maximum speed Low-pressure system pressure at maximum speed Recommended oil: API CJ4 / ACEA E9 Maximum operating tilt (precautions) 20° roll 25° pitch Oil/fuel consumption Maximum 0.1% Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at minimum speed 1.5 bar Oil pressure at maximum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure Furbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves Valve clearance value  CRIN3 / 8 holes  Manual  CRIN3 / 8 holes  Manual  Di μ	Firing order	1-5-3-6-2-4	
Injector type Charge pump type Manual Fuel prefilter filtration capacity Main fuel filter filtration capacity Low-pressure system pressure at minimum speed Low-pressure system pressure at maximum speed Low-pressure system pressure at maximum speed Recommended oil: API CJ4 / ACEA E9 Maximum operating tilt (precautions) 20° roll 25° pitch Oil/fuel consumption Maximum 0.1% Lubrication system Gear pump at the bottom of the timing Oil cooling system Cooler integrated into the engine (left side) Oil pressure at minimum speed 1.5 bar Oil pressure at maximum speed 2.5 bar at 5 bar depending on the temperature Relief valve adjustment pressure Air suction type Turbocharged with air/air intercooler Air preheating type Grid heater with relay controlled by the ECU Number of valves Valve clearance value  CRIN3 / 8 holes Manual  Dil μ  μ  Δε	Maximum pressure in the high-pressure system	1800 bar	
Charge pump type  Fuel prefilter filtration capacity  Main fuel filter filtration capacity  Low-pressure system pressure at minimum speed  Low-pressure system pressure at maximum speed  Low-pressure system pressure at maximum speed  Recommended oil:  API CJ4 / ACEA E9  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Maximum 0.1%  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value	Injector brand	Bosch	
Fuel prefilter filtration capacity  Main fuel filter filtration capacity  Low-pressure system pressure at minimum speed  Low-pressure system pressure at maximum speed  Low-pressure system pressure at maximum speed  Recommended oil:  API CJ4 / ACEA E9  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Maximum 0.1%  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value  0.35 mm (inlet and exhaust)	Injector type	CRIN3 / 8 holes	
Main fuel filter filtration capacity       5 μ         Low-pressure system pressure at minimum speed       0.5 bar - 8.5 bar         Low-pressure system pressure at maximum speed       0.5 bar - 8.5 bar         Recommended oil:       API CJ4 / ACEA E9         Maximum operating tilt (precautions)       20° roll 25° pitch         Oil/fuel consumption       Maximum 0.1%         Lubrication system       Gear pump at the bottom of the timing         Oil cooling system       Cooler integrated into the engine (left side)         Oil pressure at minimum speed       1.5 bar         Oil pressure at maximum speed       2.5 bar at 5 bar depending on the temperature         Relief valve adjustment pressure       5 bar (spring pressure)         Air suction type       Turbocharged with air/air intercooler         Air preheating type       Grid heater with relay controlled by the ECU         Number of valves       24 (4 per cylinder)         Valve clearance value       0.35 mm (inlet and exhaust)	Charge pump type	Manual	
Low-pressure system pressure at minimum speed  Low-pressure system pressure at maximum speed  Recommended oil:  API CJ4 / ACEA E9  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value  O.5 bar - 8.5 bar  0.5 bar - 8.5 bar  0.5 bar - 8.5 bar  0.5 bar - 8.5 bar  0.6 bar - 8.5 bar  0.7 bar - 8.5 bar  0.8 bar - 8.5 bar  0.9 cooling system  0.1 bottom of the timing  Cooler integrated into the engine (left side)  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)	Fuel prefilter filtration capacity	10 μ	
Low-pressure system pressure at maximum speed  Recommended oil:  API CJ4 / ACEA E9  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  5 bar (spring pressure)  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value  0.35 mm (inlet and exhaust)	Main fuel filter filtration capacity	5 μ	
Recommended oil:  Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  Relief valve adjustment pressure  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value  API CJ4 / ACEA E9  API CJ4 / ACEA E9  Apr CJ4 / ACEA E9  Turbocharged into the timing  Cooler integrated into the engine (left side)  1.5 bar  Cooler integrated into the engine (left side)  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  0.35 mm (inlet and exhaust)	Low-pressure system pressure at minimum speed	0.5 bar - 8.5 bar	
Maximum operating tilt (precautions)  20° roll 25° pitch  Oil/fuel consumption  Maximum 0.1%  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  Relief valve adjustment pressure  Felief valve adjustment pressure  Turbocharged with air/air intercooler  Air suction type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Felief valve adjustment pressure  Turbocharged with air/air intercooler  Oil pressure at maximum speed  2.5 bar (spring pressure)  Turbocharged with air/air intercooler  Air preheating type  Orid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value	Low-pressure system pressure at maximum speed	0.5 bar - 8.5 bar	
25° pitch  Oil/fuel consumption  Maximum 0.1%  Lubrication system  Gear pump at the bottom of the timing  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  1.5 bar  Oil pressure at maximum speed  Relief valve adjustment pressure  Air suction type  Air preheating type  Number of valves  Valve clearance value  25° pitch  Maximum 0.1%  Cooler integrated into the engine (left side)  1.5 bar  2.5 bar at 5 bar depending on the temperature  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value	Recommended oil:	API CJ4 / ACEA E9	
Lubrication system  Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  Air suction type  Air preheating type  Air preheating type  Number of valves  Valve clearance value  Gear pump at the bottom of the timing  Cooler integrated into the engine (left side)  1.5 bar  2.5 bar at 5 bar depending on the temperature  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  Number of valves  0.35 mm (inlet and exhaust)	Maximum operating tilt (precautions)		
Oil cooling system  Cooler integrated into the engine (left side)  Oil pressure at minimum speed  Oil pressure at maximum speed  Relief valve adjustment pressure  Air suction type  Air preheating type  Number of valves  Valve clearance value  Cooler integrated into the engine (left side)  1.5 bar  2.5 bar at 5 bar depending on the temperature  5 bar (spring pressure)  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  24 (4 per cylinder)  Valve clearance value  O.35 mm (inlet and exhaust)	Oil/fuel consumption	Maximum 0.1%	
Oil pressure at minimum speed  Oil pressure at maximum speed  2.5 bar at 5 bar depending on the temperature  Relief valve adjustment pressure  5 bar (spring pressure)  Turbocharged with air/air intercooler  Air suction type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value  1.5 bar  2.5 bar at 5 bar depending on the temperature  5 bar (spring pressure)  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value	Lubrication system	Gear pump at the bottom of the timing	
Oil pressure at maximum speed  Relief valve adjustment pressure  Air suction type  Air preheating type  Number of valves  Valve clearance value  2.5 bar at 5 bar depending on the temperature  5 bar (spring pressure)  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  24 (4 per cylinder)  0.35 mm (inlet and exhaust)	Oil cooling system	Cooler integrated into the engine (left side)	
Relief valve adjustment pressure  Air suction type  Turbocharged with air/air intercooler  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value  5 bar (spring pressure)  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  24 (4 per cylinder)  0.35 mm (inlet and exhaust)	Oil pressure at minimum speed	1.5 bar	
Air suction type  Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  Valve clearance value  Turbocharged with air/air intercooler  Grid heater with relay controlled by the ECU  24 (4 per cylinder)  0.35 mm (inlet and exhaust)	Oil pressure at maximum speed	2.5 bar at 5 bar depending on the temperature	
Air preheating type  Grid heater with relay controlled by the ECU  Number of valves  24 (4 per cylinder)  Valve clearance value  0.35 mm (inlet and exhaust)	Relief valve adjustment pressure	5 bar (spring pressure)	
Number of valves24 (4 per cylinder)Valve clearance value0.35 mm (inlet and exhaust)	Air suction type	Turbocharged with air/air intercooler	
Number of valves24 (4 per cylinder)Valve clearance value0.35 mm (inlet and exhaust)	Air preheating type	Grid heater with relay controlled by the ECU	
	Number of valves	24 (4 per cylinder)	
Engine cooling system Coolant	Valve clearance value	0.35 mm (inlet and exhaust)	
	Engine cooling system	Coolant	



Engine	
Fan type	Vistronic fan
Thermostat begins to open at	83°C
Liquid temperature from - to	-35°C to 106°C
Air compressor brand for the brake system	Knorr Bremse
Type of compressor	Pistons
Pressure range:	6.5 bar to 8 bar
Type and brand of air conditioning compressor	SD7H15 - Sanden
Air conditioning compressor displacement (cm <sup>3</sup> )	150
Refrigerant	R134a
Block preheater	110 or 220 volts
Fuel preheater	Options
Urea preheater	Coolant (tank) Electric (supply module and urea lines)
Exhaust fumes recirculation system	DOC (diesel oxidation catalyst) + SCR (selective catalytic reduction) systems
DOC (diesel oxidation catalyst) system	DOC (diesel oxidation catalyst) with metal substrate (exhaust fumes oxidation catalyst)
SCR system (AdBlue™ or DEF injection)	SCR with 2 ceramic substrates in silencer (exhaust fume treatment)
Safety system	NOx sensors at exhaust inlet and outlet
Device brand	Bosch Denox 2.2
Type of control	Engine controller EEM4
Tank strainer filtration capacity	70 μm
Main filter filtration capacity	20 μm
Filtration capacity of pump module inlet connector	100 μm
Urea solidification temperature	-11°C
Oil vapour recirculation system	Closed system breather (CCV)
Belt: air conditioning compressor/left-hand alternator/air compressor (2 dimensions: with or without air compressor)	Poly V 6 rib belt
Belt: fan/right-hand alternator/air compressor (2 dimensions: a different fan pulley is used depending on the power)	Poly V 10 rib belt

Rear axle transmission	
Gearbox type	GBA25
Transmission type	Dyna-6
Number of ratios	6
Number of ranges	4
Number of gears	24/24
Creeper gears	4/1
Number of gears with creeper gears	36/36
Super creeper gears	14/1
Number of gears with super creeper gears	48/48
Maximum speed	40 kph or 50 kph <sup>(1)</sup>
Rear axle type	GPA23
Number of pinion/ring gear teeth	8/39



Rear axle transmission		
Rear axle ratio (crownwheel and pinion)	27.161	
4WD ratio	0.830	
Final drive type	Super Heavy Duty	
Final drive reduction ratio	(64+14)/14	
Maximum 4WD clutch torque	206 daNm	
Number of 4WD discs	6	
Main brake type	Disc	
Number of discs	1 per side	
Braking pressure	-	
Parking brake type	Hand brake	
Trailer brake type	Hydraulic and/or pneumatic with built-in antifreeze pump	
Pneumatic trailer braking pressure	6.5 bar to 8 bar	
Hydraulic trailer braking pressure	0 to 150 bar	
Maximum operating tilt - pitch (front/rear)	15° (> 15 kph) 22° (< or = 15 kph)	
Maximum operating tilt - roll (right/left)	15° (> 15 kph) 22° (< or = 15 kph)	
Maximum operating tilt - combined	15° (> 15 kph) 22° (< or = 15 kph)	
Transmission preheater	110 V and 240 V accessory kits	
Total loaded weight supported by rear axle - 40 kph or 50 kph <sup>(1)</sup>	6900 kg (40 kph and 50 kph) 8300 kg (40 kph with high-pressure braking option)	

1. depending on the market or legislation

Fron	t axle
Front axle brand	DANA
Axle type	Fixed or suspended
Supplier reference - fixed front axle	735/530
Supplier reference - suspended front axle	735/613
Rotational direction	Anti-clockwise
Fixed front axle weight	347 kg
Suspended front axle weight	587 kg
Total loaded weight supported by front axle (maximum load on road)	5400 kg
Recommended oil type (beam and final drive)	SAE85W90 (API GL4-MIL L-2105)
Total ratio for fixed front axle	17.000
Total ratio for suspended front axle	17.000
Number of teeth on final drive	_
Ratio for fixed axle final drive	6
Ratio for suspended axle final drive	6
Number of fixed axle pinion/ring gear teeth	12/34
Number of suspended axle pinion/ring gear teeth	12/34
Differential type	Multidisc
Number of differential discs	12
Maximum steering angle	55°
Oscillation angle	± 9°



Front axle	
Type of oscillation stop	Mechanical
Steering ram diameter	68 mm x 32 mm
Steering ram stroke	2 x 129 mm
Suspension type	Hydraulics
Suspension ram diameter	65 mm x 60 mm
Suspension ram stroke	100 mm
Hydraulic control unit brand	Husco
Hydraulic control unit nominal pressure	200 bar
Number of accumulators	2
Accumulator pressure	Left-hand 0.5 I = 10 bar Right-hand 0.75 I = 50 bar
Suspension sensor type	Angular potentiometer.
Steering sensor type	Angular potentiometer.
Brake type	Combined with the rear brake
Factor K	1.326

Electrohydraulic	
System type	Open centre (OC) 57 I/min or 100 I/min Closed Centre Load Sensing (CCLS) 110 I/min
Flow rate	57 I/min or 100 I/min (OC) 110 I/min (CCLS)
High-pressure pump type	Bosch Rexroth gear pump(s) (OC) Bosch Rexroth piston pump (CCLS)
High-pressure pump displacement	19 cm3 (OC 57 l/min) 19 cm3 + 14 cm3 (OC 100 l/min) 45 cm3 (CCLS)
High-pressure pump rotational speed	2200 rpm
High-pressure pump maximum flow rate	57 I/min or 98 I/min (OC) 117 I/min (CCLS)
High-pressure pump maximum pressure	200 bar
Maximum quantity of oil to add for heavy implements	10 I
Maximum exportable oil quantity (without adding oil)	32 I
Maximum exportable oil quantity (adding oil)	42
Charge pump type	Suction (OC) Gear pump 71 cm3 (CCLS 110 l/min)
Main relief valve adjustment pressure	195 bar ± 5 bar (OC) 230 bar ± 5 bar (CCLS)
Number of spool valves (maximum)	4
Number of front "push-pull" connectors (maximum)	4
Number of rear "push-pull" connectors (maximum)	8
Maximum flow rate per spool valve	57 I/min or 98 I/min (OC) 100 I/min (CCLS)
Spool valve control type	Mechanical (OC) Electrohydraulic (CCLS)
Recommended oil:	According to MF CMS M 1145 specification



Steering	
Steering type	Hydrostatic
Type of control	Steering wheel or steering wheel + electrohydraulic spool valve
Steering unit displacement	160 cm3
Steering ram diameter	68 mm x 32 mm
Steering ram stroke	2 x 129 mm
Working pressure	175 bar ± 5 bar
Pressure relief valve adjustment pressure	175 bar ± 5 bar
Shock valve adjustment pressure	240 bar
Oil recommended for steering	According to MF CMS M1145 specification

Linkage	
Rear lift ram diameter	75 mm
Rear linkage travel	728 mm (CAT 2) 718 mm (CAT 3)
Maximum lifting capacity at ball joints (rear)	7100 kg
Operating pressure (rear)	180 bar
3-point linkage category (rear)	CAT 2 or CAT 3
Front lift ram diameter	80 mm (3.2 t) 90 mm (4 t)
Front linkage travel	684 mm (3.2 t) 750 mm (4 t)
Maximum lifting capacity at ball joints (front)	3200 kg or 4000 kg
Operating pressure (front)	180 bar
3-point linkage category (front)	CAT 2

Rear power take-off (PTO)	
Number of selections possible for rear PTO	540/1000 540/540E/1000/1000E with GSPTO option
Maximum permissible power 540/540E in 1"3/8 (6 and 21 splines)	540 = 74 kW 540E = 40 kW
Maximum permissible power 540/540E in 1"3/4 (20 splines)	540 = 74 kW 540E = 40 kW
Maximum permissible power 1000/1000E in 1"3/8 (6 and 21 splines)	1000 = 93 kW 1000E = 40 kW
Maximum permissible power 1000/1000E in 1"3/4 (20 splines)	1000 = 93 kW 1000E = 40 kW
Engine speed if PTO 540	1980 rpm
Engine speed if PTO 540E	1533 rpm
Engine speed if PTO 1000	2030 rpm
Engine speed if PTO 1000E	1572 rpm
Rotational direction	Clockwise
Clutch type	Multidisc hydraulic
Number of clutch discs	5
Control pressure	21 bar
Splined shaft type	6 or 21 in 1"3/8 or 20 in 1"3/4



Front power take-off	
Number of selections possible for front PTO	1000 rpm
Maximum permissible power - clockwise	100 kW
Maximum permissible power - anti-clockwise	110 kW
Maximum permissible torque - clockwise	497 Nm
Maximum permissible torque - anti-clockwise	549 Nm
Rotational direction	2 directions of rotation: Clockwise or anti-clockwise
Engine speed if PTO 1000	1920 rpm
Ratio	1.92
Clutch type	Multidisc hydraulic
Splined shaft type	6 or 21 in 1"3/8

Electric Ele	
Battery brand	TAB
Battery specifications (2 batteries)	12V 66 A/H
Maximum current at start-up (IEC standard)	840 A
Starter type	12 V
Starter power	3.2 KW
Alternator type	1 x 175 A or 2 x 120 A
Current available on ISOBUS connector	50 A
Hazard warning light unit	HELLA
Interior light, left-hand door	2 x 5 W
Roof light	-
Type of bulb for side light indicators on hand rail	12 V 21 W / 12 V 10 W
Type of bulb for brake lights, side lights on fenders	12 V 21 W / 12 V 5 W
Type of bulb for main beams on lighting bar at front of bonnet	H4 - 12 V 60/55 W
Type of bulb for dipped lights and side lights on lighting bar at front of bonnet	H7 - 12 V 55 W + T4 - 12 V 4 W
Type of bulb for main beams on hand rail	H4 - 12 V 60/55 W
Type of bulb for main beams on hand rail, low position	H3 - 12 V 55 W
Type of bulb for work lights on hand rail	H3 - 12 V 55 W
Type of bulb for work lights on roof	H3 - 12 V 55 W
Type of bulb for work lights on step	-
Type of bulb for number plate lights on roof	H3 - 12 V 55 W
Type of bulb for reversing lights	12 V 21 W
Type of bulb for rotary beacon	H1 - 12 V 55 W

Electronics		
Function of each controller		
DCC3	Instrument panel	
EXT Lite	-	



Elect	ronics
CAN levers and armrest	On tractors with multifunction armrest, controls for:  - transmission (ranges, reverse shuttle, SV1/SV2, PTO)  - linkage  - hydraulic
	– Headland Management
	Engine memory A
AUTOTRONIC 5 DC	On tractors with multifunction armrest, 4 Autotronic 5 DC: - 1 for linkage/auxiliary hydraulic spool valves - 2 for transmission
	<ul> <li>1 TECU for VIN code/suspended front axle/suspended cab</li> </ul>
	On tractors without multifunction armrest, 4 Auto- tronic 5 DC:  — 1 for linkage
	– 2 for transmission
	<ul> <li>1 TECU (without VIN code) suspended front axle</li> </ul>
SB23 valves	On tractors with multifunction armrest:  - Electrohydraulic spool valves
Lights module	On tractors with multifunction armrest:  — User interface for lights
	On tractors without multifunction armrest:  - Linkage/rear electrohydraulic power take- off/user lights interface
Lighting controller	-
EEM4 (ECM Tier 4 AGCO Power)	Engine/Denoxtronic module
NOx ECU	2 NOx ECU: converters of NOx sensor signals to EEM4 via CAN
Danfoss Orbitrol valve	Orbitrol for the Auto-Guide™ function
TopDock aerial	Satellite signal receiver for the Auto-Guide™ function
Datatronic CCD	On tractors with multifunction armrest:  — Onboard computer
Automatic air conditioning module	On tractors with multifunction armrest:  — Air conditioning

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