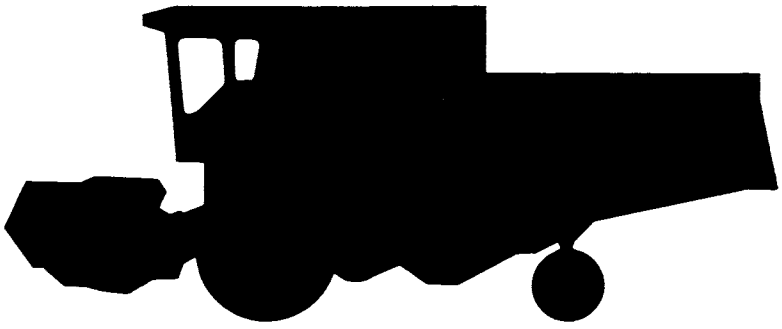
REPAIR MANUAL

CLAAS



CLAAS-
DOMINATOR 106-56

GROUP INDEX

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Specifications

1 SPECIFICATIONS

SPECIFICATIONS DOMINATOR 106

Technical data, dimensions and weights are given as an indication only. CLAAS reserve the right to make changes in design and specifications at any time without previous notice and rejects all responsibility in case of errors.

NOTE: Front, rear, right and left refer to direction of travel.

To be sure, always compare settings and filling capacities with specifications stated in the appropriate Operator's Manual for the machine concerned.

Cutterbar

Cutting widths	3.90 m (13 ft) 4.50 m (15 ft) 5.10 m (17 ft) 5.70 m (19 ft) 6.60 m (22 ft) 7.50 m (25 ft)
Height adjustment	hydraulic
Cutting height range	from 360 mm (14 1/4 in) below ground level to 1300 mm (51 1/4 in) above ground level
Clearance height under cutterbar skid	with floatation springs in use 950 mm (37 1/2 in) with floatation springs blocked 1100 mm (43 1/2 in)
Reel drive	belt-operated variable speed drive
Reel height adjustment	hydraulic
Feeder house	chain-type feed rake
Cutterbar clutch	hydraulic

Threshing Equipment

Stone trap	standard equipment
Concave	adjustable from operator's platform rear of concave separately adjustable (2nd lever) width 1580 mm (62 1/4 in), 12 bars
Disawning	disawning plates underneath the concave, two and three disawning plates can be engaged separately
Threshing drum	width 1580 mm (62 1/4 in) diameter 450 mm (17 3/4 in) six rasp bars, seven drum discs speed infinitely variable from 650 to 1500 1/min (rpm) Optional: a) step pulley drive – 750, 1000, 1200, 1500 1/min (rpm) b) slow-speed threshing drum drive kit (chain drive) from 290 to 680 1/min (rpm)
Threshing mechanism clutch	hydraulic

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Straw Walkers

Type	step type walkers and intensive separation system (crankshaft with tines)
No. of walker racks	six
No. of walker crankshafts	two
Speed of walker crankshafts	220_{-5} 1/min (rpm)
No. of tine crankshafts	two
No. of tines per crankshaft	six
Walker area	7.00 m^2 (10 850 sq in)
Separating area	7.95 m^2 (12 322 sq in)

Cleaning

Type	forced air cleaning fan
Wind volume control	by infinitely variable fan speed additional fan shutters (optional)
Total cleaning area	5.10 m^2 (7 905 sq in)

Grain tank

Capacity	6500 litres (178.75 U.K. bushels; 184.6 U.S. bushels)
Unloading tube	hydraulically operated position control

Engines	Mercedes OM 401.901
Cubic capacity	10455 cm^3 (638 in^3)
Max. speed 1/min (rpm)	2390
Idle speed 1/min (rpm)	1150
kW (DIN H.P.)	151 (205)
Cooling	water
Fuel tank capacity	300 litres (66 Imp. gal, 79 U.S. gal)
Battery	12 Volt, 143 Ah

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Ground drive		hydrostatic, controlled by lever on operator's platform
Transmission		three gear ranges in either forward or reverse 1. and 2. gear range for field operations 3. gear range for road travel
Ground speeds in kilometers per hour		**on 23.1-26 R1 / 18.4-34 R1 tyres**
Forward travel		1. from 0 to 6.1 km/h (from 0 to 7.7 km/h) 2. from 0 to 8.9 km/h (from 0 to 11.1 km/h) 3. from 0 to 20.0 km/h (from 0 to 25.5 km/h)
Reverse travel		1. from 0 to 4.6 km/h (from 0 to 5.8 km/h) 2. from 0 to 6.6 km/h (from 0 to 8.8 km/h) 3. from 0 to 15.3 km/h (from 0 to 19.0 km/h)
Ground speeds in miles per hour		**on 23.1-26 R1 / 18.4-34 R1 tyres**
Forward travel		1. from 0 to 3.8 mph (from 0 to 4.8 mph) 2. from 0 to 5.5 mph (from 0 to 6.9 mph) 3. from 0 to 12.4 mph (from 0 to 15.8 mph)
Reverse travel		1. from 0 to 2.9 mph (from 0 to 3.6 mph) 2. from 0 to 4.1 mph (from 0 to 5.5 mph) 3. from 0 to 9.5 mph (from 0 to 11.8 mph)
		Figures in brackets are only applicable for certain countries. In countries with a speed limit of 20 km/h (12.4 mph) for self-propelled machinery of husbandry, the hydrostatic drive system incorporates a device that limits the ground speed accordingly.
Traction Wheel Drive		via final drive gears in oil bath
Steering		hydrostatic
Brakes	Foot brake	hydraulic, designed to work independently when the pedal lock is removed
	Hand brake	mechanical, independent of foot brakes

Tyres and Tyre Pressures

tyre size	maximum tyre pressure	minimum tyre pressure						
		maize picker head		grain cutterbar				
		six-row	five-row four-row	7.50 m (25 ft)	6.60 m (22 ft)	5.70 m (19 ft)	5.10 m (17 ft)	4.50 m (15 ft)	3.90 m (13 ft)
	bar (psi)	bar (psi)	bar (psi)	bar (psi)			bar (psi)		bar (psi)
18.4-34 14 PR	3.3 (48)	–	3.2 (46)	3.2 (46)			3.0 (43)		2.8 (41)
23.1-26 14 PR	2.5 (36)	2.5 (36)	2.3 (33)	2.3 (33)			2.1 (30)		1.9 (27)
28.1-26 12 PR	1.8 (26)	1.8 (26)	1.7 (25)	1.7 (25)			1.6 (23)		1.5 (22)
30.5-32 12 PR	1.5 (22)	1.2 (17)	1.1 (16)	1.1 (16)			1.1 (16)		1.1 (16)
14.5/75-20 8 PR	–	3.0 (43)	3.0 (43)	3.0 (43)			3.0 (43)		3.0 (43)

Where ground conditions allow maximum tyre pressure, the maximum tyre pressure should be maintained in order to obtain the longest possible service life of the tyre.

Torque Settings of Wheel Bolts and Wheel Nuts	Front wheels	wheel nuts with thrust piece H 22 DIN 74361-10 = 860 Nm (622 ft lb)
	Rear wheels	wheel bolts M 18 x 1.5 = 325 Nm (235 ft lb)

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Weights

Combine equipped with 18.4-34 R1 and 14.5/75-20 tyres, empty fuel tank and six cylinder engine:

Determine the total weight of the machine by adding the weight of the equipment used on the combine to the weight of the basic machine.

Basic machine (without cutterbar)		9060 kg (19974 lb)
With cutterbar and spring tine reel		
3.90 m (13 ft)	add	960 kg (2116 lb)
4.50 m (15 ft)	add	1040 kg (2292 lb)
5.10 m (17 ft)	add	1120 kg (2469 lb)
5.70 m (19 ft)	add	1200 kg (2446 lb)
With bat-type reel		
6.60 m (22 ft)	add	1320 kg (2910 lb)
7.50 m (25 ft)	add	1440 kg (3175 lb)
Two cpl. divider assemblies	add	50 kg (110 lb)
With straw chopper	add	284 kg (626 lb)
With four-row maize picker head	add	1260 kg (2778 lb)
With five-row maize picker head	add	1510 kg (3329 lb)
With six-row maize picker head	add	1740 kg (3836 lb)
With maize head stalk chopper	add	250 kg (551 lb)
With wheel weights (one set)	add	104 kg (229 lb)
With liquid ballast (magnesium chloride solution) filled into tyres	add	254 kg (560 lb)
With extra weights in compliance with road regulations (not for all countries)	add	300 kg (661 lb)

Combine Dimensions

Wheel Thread	front	on 18.4-34 tyres	2510 mm (98 3/4 in)
		on 23.1-26 14 PR tyres and DW 20-26 wheels	2550 mm (100 1/2 in)
		on 28.1-26 tyres	2780 mm (109 1/2 in)
	rear	adjustable axle	2300 mm (90 1/2 in)
Width over Tyres		on 18.4-34 tyres	2980 mm (117 1/4 in)
		on 23.1-26 14 PR tyres and DW 20-26 wheels	3140 mm (123 1/2 in)
		on 28.1-26 tyres	3500 mm (137 3/4 in)
Wheel Base			3650 mm (143 3/4 in)
Ground Clearance			420 mm (16 1/2 in)
Turning Diameter, conforming to DIN 70020 Specifications			16800 mm (661 1/2 in)

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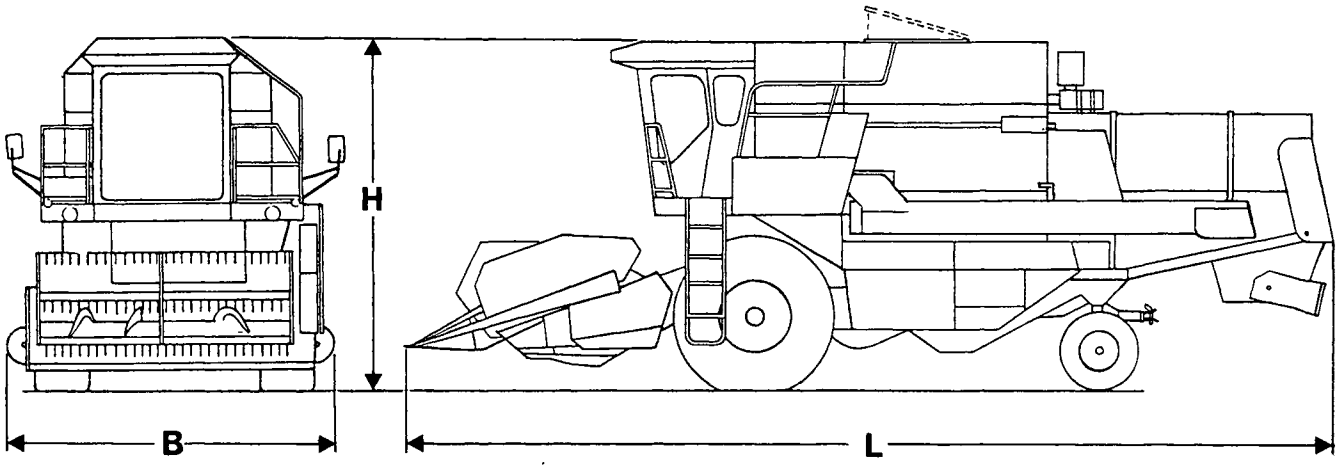


Operating Position

WIDTH B

Cutting width	3.90 m (13 ft)	4.50 m (15 ft)	5.10 m (17 ft)	5.70 m (19 ft)	6.60 m (22 ft)	7.50 m (25 ft)
Overall width	5565 mm (219 in)	6175 mm (243 in)	6785 mm (267 1/4)	7395 mm (291 1/4)	8310 mm (327 1/4)	9225 mm (363 1/4 in)

Overall widths are with deflectors set out on each side by 600 mm (23 3/4 in).

With four-row (3 m) maize picker head	3260 mm (128 1/4 in)
With five-row maize picker head	4060 mm (159 3/4 in)
With six-row maize picker head	5200 mm (204 3/4 in)

HEIGHT H

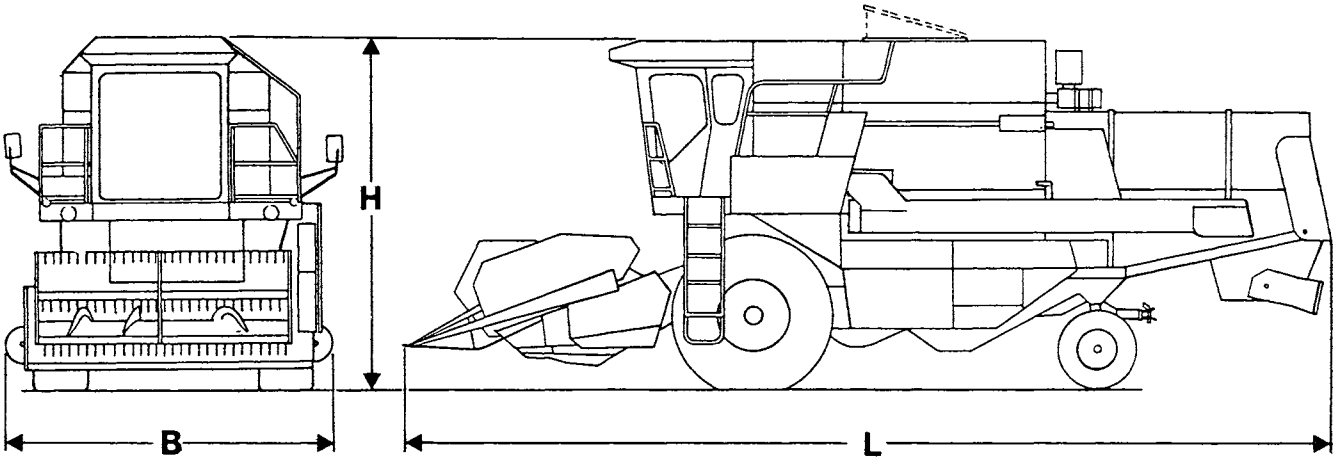
To top of grain tank		3760 mm (148 in)
When grain tank lid is open	add	415 mm (16 3/8 in)
To top of cab		3720 mm (146 1/2 in)
To bottom edge of grain tank unloading tube		4020 mm (158 1/4 in)

On 23.1-26 or 28.1-26 tyres the height dimensions are being reduced by approx. 40 mm (1 1/2 in).

LENGTH L

Without dividers		9190 mm (361 3/4 in)
With hoop dividers		9550 mm (376 in)
With long dividers		10540 mm (415 in)
With short dividers		10290 mm (405 in)
Witz maize picker head		10220 mm (402 1/4 in)
With straw hood back panel adjusted to rearward position	add	300 mm (11 3/4 in)
With straw spreader	add	500 mm (19 3/4 in)

SPECIFICATIONS DOMINATOR 106



Transport Position

WIDTH B

Cutting width	3.90 m (13 ft)	4.50 m (15 ft)	5.10 m (17 ft)	5.70 m (19 ft)	6.60 m (22 ft)	7.50 m (25 ft)
Overall width	4365 mm (171 3/4)	4975 mm (195 3/4)	5585 mm (220 in)	6195 mm (244 in)	7110 mm (280 in)	8025 mm (315 in)

With cutterbar detached	3000 mm (118 in)
With four-row (3 m) maize picker head	3000 mm (118 in)
With five-row maize picker head	3800 mm (149 1/2 in)
With six-row maize picker head	4940 mm (194 1/2 in)

HEIGHT H

To top of grain tank	3760 mm (148 in)
To top of cab	3720 mm (146 1/2 in)

On 23.1-26 or 28.1-26 tyres the height dimensions are being reduced by approx. 40 mm (1 1/2 in).

LENGTH L

With cutterbar detached	7770 mm (306 in)
Without dividers	9290 mm (365 3/4 in)
With hoop dividers	9650 mm (380 in)
With long dividers	10640 mm (419 in)
With short dividers	10390 mm (409 in)
With maize picker head	10320 mm (406 in)

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SETTINGS AND CAPACITIES

Hydraulic Oil Pressures

Lift hydraulic system pressure relief valve	180 bar (2610 psi)
Hydrostatic steering system pressure relief valve	90^{+5} bar ($1305^{+72.5}$ psi)
Hydrostatic ground drive: (LINDE hydrostatic pump BPV 100 S)	
Charge pressure	16 bar (232 psi)
Operating pressure	420 bar (6091 psi)
(SAUER hydrostatic pump SPV 23)	
Charge pressure	14 bar (203 psi)
Operating pressure	420 bar (6091 psi)

Oil Capacities

Transmission gearbox	5 litres (4.4 Imp. qt; 5.28 U.S. qt) SAE 90 (MIL-L-2105 B) API-GL-5-90 Hypoid Transmission Oil
Final drive gearboxes	4 litres each (3.5 Imp. qt; 4.2 U.S. qt) SAE 90 (MIL-L-2105 B) API-GL-5-90 Hypoid Transmission Oil
Lift hydraulic system	approx. 7 litres (6.2 Imp.qt; 7.4 U.S. qt) Hydraulic Oil, H-LP Oils conforming to (DIN 51524) ISO-VG 68 Specifications
LINDE hydrostatic ground drive system	approx. 8 litres (7 Imp. qt; 8.5 U.S. qt) Hydraulic Oil, H-LP Oils conforming to (DIN 51524) ISO-VG 68 Specifications
SAUER hydrostatic ground drive system	approx. 27 litres (23.76 Imp. qt; 28.5 U.S. qt) Hydraulic Oil, H-LP Oils conforming to (DIN 51524) ISO-VG 68 Specifications
Engines	consult engine instruction book and combine operator's manual

Slip clutches

Reel	200 Nm (145 ft lb)
Main table auger	200 Nm (145 ft lb)
Upper feed rake shaft	220 Nm (159 ft lb)
Returns elevator	adjust ratchet clutch so that no play exists

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Shear Bolt

Grain tank unloading system	M 10 x 45 DIN 931-8.8
Knife Register	the center of the knife sections should line up with the center of the cutterbar fingers at each end of the knife stroke

Reel

Basic setting	reel drive shaft placed vertically over the knife. The tines should be adjusted to vertical position.

Main table auger

Basic setting	approx. 15 mm (19/32 in) clearance between auger flights and bottom of cutterbar

Concave

Control (initial) setting	concave entrance:	13 mm (1/2 in) clearance measured at third concave bar
	concave exit:	3 mm (1/8 in) clearance measured at third last concave bar
	concave main adjusting lever:	locked in 3rd hole of quadrant
	concave rear adjusting lever:	locked in 1st hole of quadrant (e = narrow)

Brakes	Foot brake	brake must grip when the pedal is depressed through one third of its total travel
	Hand brake	brake should be effective with the handle locked in the first three to four teeth in the segment
Steering		with the steering cylinder piston rod fully extended, the adjustable stop bolts must be contacting the steering arms

SPECIFICATIONS DOMINATOR 96

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NOTE: Front, rear, right and left refer to direction of travel.

To be sure, always compare settings and filling capacities with specifications stated in the appropriate Operator's Manual for the machine concerned.

Cutterbar

Cutting widths	3.60 m (12 ft)	3.90 m (13 ft)	4.50 m (15 ft)	5.10 m (17 ft)	5.70 m (19 ft)
Height adjustment	hydraulic				
Cutting height range	from 360 mm (14 1/4 in) below ground level to 1300 mm (51 1/4 in) above ground level				
Clearance height under cutterbar skid	with floatation springs in use 925 mm (36 1/2 in) with floatation springs blocked 1075 mm (42 1/4 in)				
Reel drive	belt-operated variable speed drive				
Reel height adjustment	hydraulic				
Feeder house	chain-type feed rake				
Cutterbar clutch	belt-operated				

Threshing Equipment

Stone trap	standard equipment
Concave	adjustable from operator's platform rear of concave separately adjustable (2nd lever) width 1320 mm (52 in), 12 bar
Disawning	disawning plates underneath the concave, two and three disawning plates can be engaged separately
Threshing drum	width 1320 mm (52 in) diameter 450 mm (17 3/4 in) six rasp bars, six drum discs speed infinitely variable from 650 to 1500 1/min (rpm) Optional: a) step pulley drive 800, 1000, 1200, 1500 1/min (rpm) a1) additional speed 650 1/min (rpm) b) slow speed threshing drum drive kit, 3-speed chain drive: 300, 430 and 550 1/min (rpm)
Threshing mechanism clutch	belt-operated

SPECIFICATIONS DOMINATOR 96

Straw Walkers	
Type	step type walkers and intensive separation system (crankshaft with tines)
No. of walker racks	five
No. of walker crankshafts	two
Speed of walker crankshafts	220_{-5} 1/min (rpm)
No. of tine crankshafts	two
No. of tines per crankshaft	five
Walker area	5.80 m^2 (8990 sq in)
Separating area	6.60 m^2 (10230 sq in)
Cleaning	
Type	forced air cleaning fan
Wind volume control	by infinitely variable fan speed additional fan shutters (optional)
Total cleaning area	4.25 m^2 (6588 sq in)
Grain tank	
Capacity	5200 litres (143 Imp. bushels, 147.7 U.S. bushels)
Unloading tube	hydraulically operated position control
Engine	Mercedes OM 352 A
Cubic capacity	5675 cm^3 (346 in^3)
Max. speed 1/min (rpm)	2600
Idle speed 1/min (rpm)	1150
kW (DIN H.P.)	110 (150)
Cooling	water
Fuel tank capacity	300 litres (66 Imp. gal, 79 U.S. gal)
Battery	12 Volt, 110 Ah
Ground Drive	
a) Mechanical	variable ground speed, hydraulically controlled
Clutch	dry single disc clutch
Transmission	three forward, one reverse gear
Speed range	**on 23.1-26 R 1 tyres** 1. Gear 1.6 to 4.0 km/h (0.9 to 2.5 mph) 2. Gear 3.5 to 8.6 km/h (2.4 to 5.3 mph) 3. Gear 8.0 to 19.7 km/h (5.0 to 12.2 mph) R.-Gear 2.8 to 6.9 km/h (1.7 to 4.3 mph)

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