

Unimog Technical Data for U500 North America

Models: 405.210 U500NA, short wheelbase
 405.230 U500NA, long wheelbase



MOG-CC-C-027(7/04PI). Specifications are subject to change without notice. Unimog is registered to ISO 9001. Copyright 2005, Freightliner LLC. All rights reserved. Unimog North America is a member of the Freightliner Group. Freightliner is a DaimlerChrysler Company.

Technical Specifications of U500 NA

1	Engine	3
1.1	Capacities	3
1.2	Performance Graph	4
2	Electrical System.....	5
3	Compressed Air System.....	5
4	Clutch.....	5
5	Transmission	5
6	Axles/Suspension	6
7	Transmission Ratio / Driving Speed / Traction Force Diagrams.....	6
7.1	Transmission Ratios / Driving Speed	6
7.2	Driving Speed - Conversion Factors	7
7.3	Wheel Tracks and Rim Table	8
8	Service Brake	9
8.1	Parking Brake.....	9
8.2	Exhaust Brake	9
9	Frame.....	9
10	Trailer Coupling.....	9
11	Steering.....	9
12	Cab.....	9
12.1	Instruments.....	10
12.2	Lights	10
13	PTOs.....	11
13.1	Live front PTO (code N08)	11
13.2	Overview of available PTOs	11
14	Hydraulic System	12
14.1	Basic hydraulics	12
14.2	Power hydraulic system (closed or open circuit).....	13
15	Dimensions U500.....	14
16	Design Gross Weights and Loads	18
17	Trailer Couplings and End Cross Members.....	18
18	Off Road relevant data	19

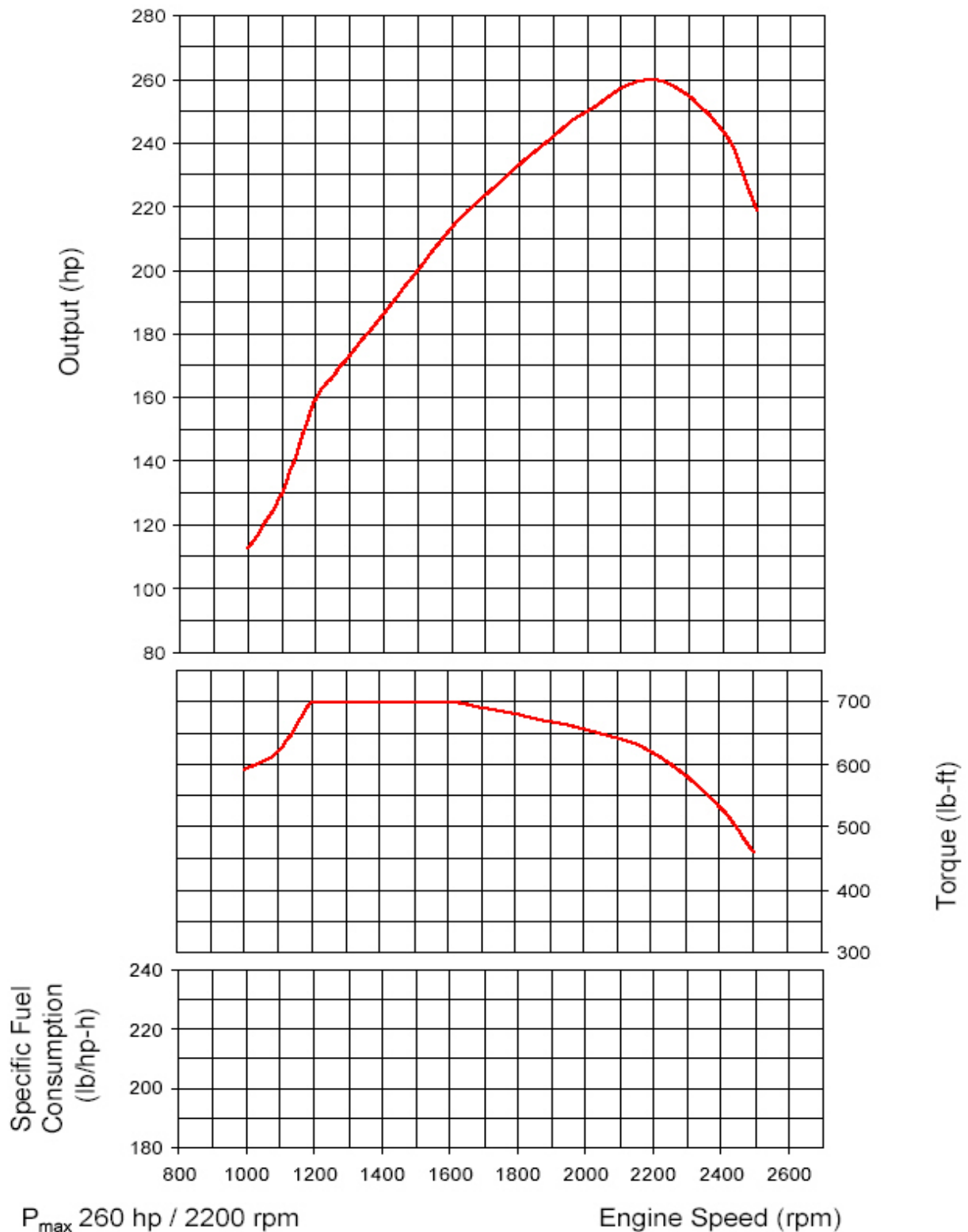
1 Engine

Emission class	EPA04 LEV
Manufacturer	Mercedes-Benz
Type (LA= Turbocharger with intercooler)	OM 906 LA
Model	902.912
No. and arrangement of cylinders	6 (upright inline)
Working method:	4-stroke
Power output	260 hp / 193.88 kW
at rated speed	2,200 rpm
Max. torque	700 lb-ft / 949 Nm
at speed	1,200 - 1,600 rpm
Idle speed	600 rpm
Electrical speed governor	EDR
Torque rise	13.0 %
Bore (diameter)	4.02 inch / 102 mm
Stroke	5.12 inch / 130 mm
Total displacement	389 inch ³ / 6,370 cm ³
Compression ratio	18 : 1
Electronic fuel injection jets	6-hole-fuel injection jets
Valve arrangement	2 inlet valve 1 exhaust valve
Crankshaft mounting	7-bearing
Cooling - Water with Thermostat	Hydrostatic fan
Cold start ability without assistance (standard)	10.4°F / -12°C
Cold start ability with grid heater (code M89)	-13°F / -25°C
Cold start ability with Z43	-22°F / -30°C
Dry weight	1,201 lbs / 545 kg

1.1 Capacities

Cooling system with heater	9.5 gal / 36 l
Engine oil without filter	7.1 gal / 26.9 l
Engine oil with filter	7.4 gal / 28 l
Fuel tank	60 gal / 227 l

1.2 Performance Graph



P_{max} 260 hp / 2200 rpm

L_{max} 700 lb-ft / 1200 - 1600 rpm, $L_i = 13\%$

Engine Speed (rpm)

Stationary full load curves

2 Electrical System

General Information	14 Volt alternator, 12 V starter, 12 V lights, 24 V electronics
Alternator	14 V, 145 A
Alternator increased output	14 V, 270 A
Starter output	4 hp / 3 kW
Battery	3x12 V, 96 Ah (Delphi; 1150)
Trailer socket rear	7-pin
Implement socket at battery box	16-pin

3 Compressed Air System

Operating pressure	117.5 psi / 8.1 bar
Compressor	Gear wheel driven, via the control drive of engine; 15.5 cfm (438.9 l/min) total displacement
Conditioning of air	Air drier (with integrated pressure regulator)
Delivery at rated engine speed	79.25 gal / min (300 l / min) at 2,200 rpm (engine) and 117.5 psi / 8.1 bar
Reservoir, brake system	2 x 7.53 gal / 2 x 28.5 l
Compressed air connection	Tire inflating valve at test connection of reservoir

4 Clutch

Type	Self adjusting single plate clutch
Pressure plate dia.	15.55 inch / 395 mm
Friction surface	120 inch ² / 774.19 cm ²
Lining	Asbestos free

5 Transmission

Type	All synchromesh DC 8-speed EPS-manual gearbox BM: G 718.840 Integrated permanent front wheel drive (all wheel drive) Torque distribution front/rear axle 50:50 1-6 gears can be driven in reverse Code G03: 7-8 reversing gears open for rail/road application Code G20: Working gears; Code G21: Working and crawler gears
Model	UG 100-8 / 9,57-0,74 GPA, EPS
Gear ratios	See Table 7.1

6 Axles/Suspension

Type		Portal axles on trailing arm and transverse control struts. Hub reductions – identical design front and rear All wheel drive (Standard) with interaxle differential lock Differential locks rear (Standard), front (code A52)
Front axle	Model	737.591
Rear axle	Model	747.591
All differential locks		While in motion without traction force interruption electr., pneumatically engage able and disengage able
Axle ratio		i=5.92
Axle flange dimension		84.65 inch / 2,150 mm
Pitch circle diameter of wheel studs		13.19 inch / 335 mm
Number of wheel studs		10
Suspension	front	Helical springs and telescopic shock absorbers
	rear	As front
Anti-roll bar		Front and rear axle integrated in trailing arms, stabilizer-trailing arms and transverse control arms

7 Transmission Ratio / Driving Speed / Traction Force Diagrams

7.1 Transmission Ratios / Driving Speed

At rated engine speed: 2,200 rpm
 Axle ratio i=5.92 (differential ratio multiplied by wheel hub ratio) and tires 395/85 R20 XZL
 Differential ratio: i=2.182 (24:11) / wheel hub ratio: 2.714 (38:14)
 Working gear ratio: i=5.757
 Crawler gear ratio: i=55.874 (working gear ratio already included)

Gear	Transmission gear ratios (standard):	
	Forward	Reverse
1	9.570	14.569
2	6.635	10.101
3	4.375	6.660
4	3.219	4.900
5	2.188	3.330
6	1.517	2.309
7	1.000	1.522
8	0.736	1.120

Table 7.1: Gear ratio

Gear	Driving speeds in mph					
	Street gears		Working gears		Crawler gears ¹⁾	
	Forward	Reverse	Forward	Reverse	Forward	Reverse
1	5.21	3.42	0.91	0.59	0.09	0.06
2	7.51	4.94	1.31	0.86	0.13	0.09
3	11.40	7.49	1.98	1.30	0.20	0.13
4	15.49	10.18	2.69	1.77	0.28	0.18
5	22.79	14.97	3.96	2.60	0.41	0.27
6	32.87	21.59	5.71	3.75	0.59	0.39
7	49.86	32.76	8.66	5.69	0.89	0.59
8	67.75 ²⁾	44.52	11.77	7.73	1.21	0.80

Gear	Driving speed in km/h					
	Street gears		Working gears		Crawler gears ¹⁾	
	Forward	Reverse	Forward	Reverse	Forward	Reverse
1	8.38	5.51	1.46	0.96	0.15	0.10
2	12.09	7.94	2.10	1.38	0.22	0.14
3	18.34	12.05	3.19	2.09	0.33	0.22
4	24.93	16.38	4.33	2.84	0.45	0.29
5	36.67	24.10	6.37	4.19	0.66	0.43
6	52.90	34.75	9.19	6.04	0.95	0.62
7	80.24	52.72	13.94	9.16	1.44	0.94
8	109.03 ³⁾	71.65	18.94	12.45	1.95	1.28

- Governed electronically. Max. speed depends on testing results and technical conditions (loads, power train ratio, tires, etc.)
 - ¹⁾ crawler gears are not suitable for increasing tractive power
 - ²⁾ only possible with tire 395/85 R20, otherwise speed limitation to 55 mph
 - ³⁾ only possible with tire 395/85 R20, otherwise speed limitation to 88 km/h

Table 7.2: Driving speeds

7.2 Driving Speed – Conversion Factors

Tires:	Code:	Rolling Circumference:*	Revs per mile:	Factor:
395/85 R20 XZL	R34 / R54	3600.00	447.04	1.00
315/80 R22.5 XDN	R40	3280.00	490.65	0.91
385/65 R22.5 XZY	R41	3210.00	501.35	0.89
445/65 R22.5 AC70	R42	3509.00	458.63	0.97
445/65 R22.5 XZL	R42	3546.00	453.85	0.99
445/70 R24 XM47	R61	3705.00	434.37	1.03

* dimension in [mm]

7.3 Wheel Tracks and Rim Table

10-hole-flange, flange measurement 84.65 inch

Rim size	22,5x9.00	10.00V-20	22,5x14	22,5x11.75	13.0x24
Wheel Attachment:	*D, 335x10	*D, 335x10	*D, 335x10	*D, 335x10	*D, 335x10
Wheel Offset:	6.34 in 161 mm	6.34 in 161 mm	6.06 in 154 mm	4.72 in 120 mm	6.06 in 154 mm
Code:	R40	R32	R42	R41	R61
Tube:	tl	tl	tl	tl	tl
Part-Nr.:	A000400110 2	A405401040 1	A405401110 1	A405401080 1	A405401090 1
315/80 R 22,5	71.79 in 1,828 mm				
385/65 R 22,5				75.20 in 1,910 mm	
395/85 R 20*		71.79 in 1,828 mm			
445/65 R22,5*			72.52 in 1,842 mm		
445/70 R 24*					72.52 in 1,842 mm

*D = Pressure plate nut M22x1,5 , Pitch dia

tl = tubeless

* = snow chains not permitted

8 Service Brake	Dual circuit air brake system. Disc brakes; asbestos free brake pads, anti-lock braking system (ABS)-standard
8.1 Parking Brake	Compressed air/spring-operated brake acting on rear wheels Position of execution lever in center control panel
8.2 Exhaust Brake	Actuated electrically/pneumatically with multi-function lever, speed adjustment and cruise control, right of steering wheel (2-step for head cylinder valve and throttle valve in exhaust stream)
9 Frame	Straight ladder frame with transverse bolted C-channel and welded transverse tubular cross members, rigid design
10 Trailer Coupling	
Front	Towing jaw with pin integrated in frame
Rear	Code Q20: Gross Trailer Weight: 45,000 lbs. Code Q21: Gross Trailer Weight: 30,000 lbs.
11 Steering	Hydraulic power steering type: LS 6 Power steering, optional dual mode steering VarioPilot[®] (code C50). The steering column and pedals along with the instruments can be interchanged for left or right hand driving with one action
12 Cab	
Type	Multi-shelled cab made of fiber compound materials. Built on steel tubular supporting frame, which is mounted, shock absorbingly, with the chassis. Hydraulic cab tilting device standard.
Doors	2 side doors made of fiber compound materials with arm-rests, storage compartments and bottle holders. 2 deep view panorama windows and manual windows(power windows upon request, code S39)
Glazing	Front windshield made of laminated glass, deep windows for optimal view onto front implements. Electrically heated (code S26), 3 sun visors. Large rear window for excellent visibility onto the rear mounting areas (sliding rear window optional code S47)
Seats	
Driver's seat	Upholstered seat with head rest, height, reach, tilt and seat back adjustable, air suspended (S02), comfortable luxury contoured seat (heated), driver (S07). 3-point safety belt in B column. Storage for personal items behind driver's seat
Passenger's seat	Same as driver's seat, twin seat (code S12) upon request

Rear view mirrors	2 foldable, electrically adjustable and heated exterior rear view mirrors (standard). Wide angle rear view mirrors (code S82) and ramp mirrors (code S83)
Additional standard equipment	E-Box with fuse box and diagnostic plug behind passenger seat
Storage Possibilities	Storage box mounted on rear cab wall and under dashboard (right)
Multi-combination lever	Left of steering wheel: Signal indicator, high and low beam, flash beam, windshield wash/wiper Right of steering wheel: Exhaust brake, hand throttle and cruise control with speed limiter
Heating and A/C	3-setting blower fan, A/C (integrated, standard) , dust free ventilation, air recycling, (optional heater with engine preheating; code F43 and optional Pollen filter; code F46 available)
A/C:	Cooling energy at an outdoor temperature of 104°F/40°C and an atmospheric moisture of 40%: Fan stage 2: 23,543 BTU Fan stage 3: 27,297 BTU
Heating:	Heat energy at an outdoor temperature of 32°F/0°C and a water temperature in the heat exchanger of 176°F/80°C: Fan stage 1: 24,908 BTU Fan stage 2: 32,756 BTU Fan stage 3: 40,944 BTU Additional heat energy with code F43: Minimum heat energy: 6,141 BTU Maximum heat energy: 31,050 BTU
Hood	Tilt able, service friendly
Safety Equipment	Will be provided by Freightliner LLC
12.1 Instruments	Analog speed display, rpm gauge, reservoir and operating pressure of brake system, engine temperature, fuel gauge, 2 LCD multifunctional displays for mile-status, time, gears selected, all wheel drive and differential locks, exterior temp. display, service hour counter, PTO, working and crawler gears, ABS, PTO shaft. Optical and acoustic warning indicator, priority-controlled via display. Help for error diagnostics.
12.2 Lights	2 halogen headlights with low, high beam, light horn, parking light, 2 directional indicators front and rear, add. side indicators, clearance lights, rear lights, stop lights, license plate lights, reversing lights, hazard warning system, support for rotating yellow beacon, entrance lights, daytime running lights upon request.

13 PTOs

- 13.1 Live front PTO (code N08)** Preparation kit for code N08 (code N00) standard on base vehicle.
- Actuation Electrically operated, independent power shift PTO
Engaging time approximately 3 sec.
- Position of PTO Height above ground 45.04 inch / 1,144 mm
with tires: 315/80 R 22,5

13.2 Overview of available PTOs

Auxiliary engine power take-off (Code N05)¹⁾	
Ratio	i = 0.933
Speed at rated engine speed (2,200 rpm)	2,356 rpm
Direction of rotation (viewed in direction of travel)	Counter clockwise
Max. torque delivered (continuous)	442.5 lb·ft / 600 Nm
Max. torque delivered (intermittent)	531 lb·ft / 720 Nm
Max. continuous power output	185 hp / 138 kW
Note: Engine dependent PTO, driven via dog clutch located at rear side of engine	
Engine power take-off shaft drive (Code N08)	
Ratio	i = 2.139
Speed at rated engine speed (2,200 rpm)	1,029 rpm
PTO rated speed	1,000 rpm
Shaft speed range (adjustable)	500 – 1000 rpm
Direction of rotation (viewed in direction of travel)	Clockwise
Max. torque delivered (intermittent)	1,030 lb·ft / 1400 Nm
Max. continuous power output	201 hp / 150 kW
Power take-off shaft	1 3/4" spline shaft
Note: Shaft speed 500 - 1,000 rpm can be set using cruise control	
Gearbox high speed power take-off (Code N16)	
Ratio	i = 1
Speed at rated engine speed (2,200 rpm)	2,200 rpm
Direction of rotation (viewed in direction of travel)	Counter clockwise
Rated torque	479 lb·ft / 650 Nm
Rated power output	201 hp / 150 kW
Note: Transmission dependent, drive is directly coupled to the transmission input shaft.	
Retrofitting possibility of code N18	
Note: Transmission with retrofitting option for high speed auxiliary PTO's (code N16/N19). Transmissions with code N18 are already equipped with a suitable drive shaft for the PTO N16/N19 install.	
Note: Retrofitting of the high speed PTO (code N19) requires the change of the frame cross member above the transmission.	

Gearbox high speed power take-off (Code N19)	
Ratio	i = 0.61
Speed at rated engine speed (2,200 rpm)	3,607 rpm
Direction of rotation (seen in direction of travel)	Clockwise
Rated torque	236 lb·ft / 320 Nm
Rated power output	161 hp / 120 kW
Note: Transmission dependent PTO (flange drive).	

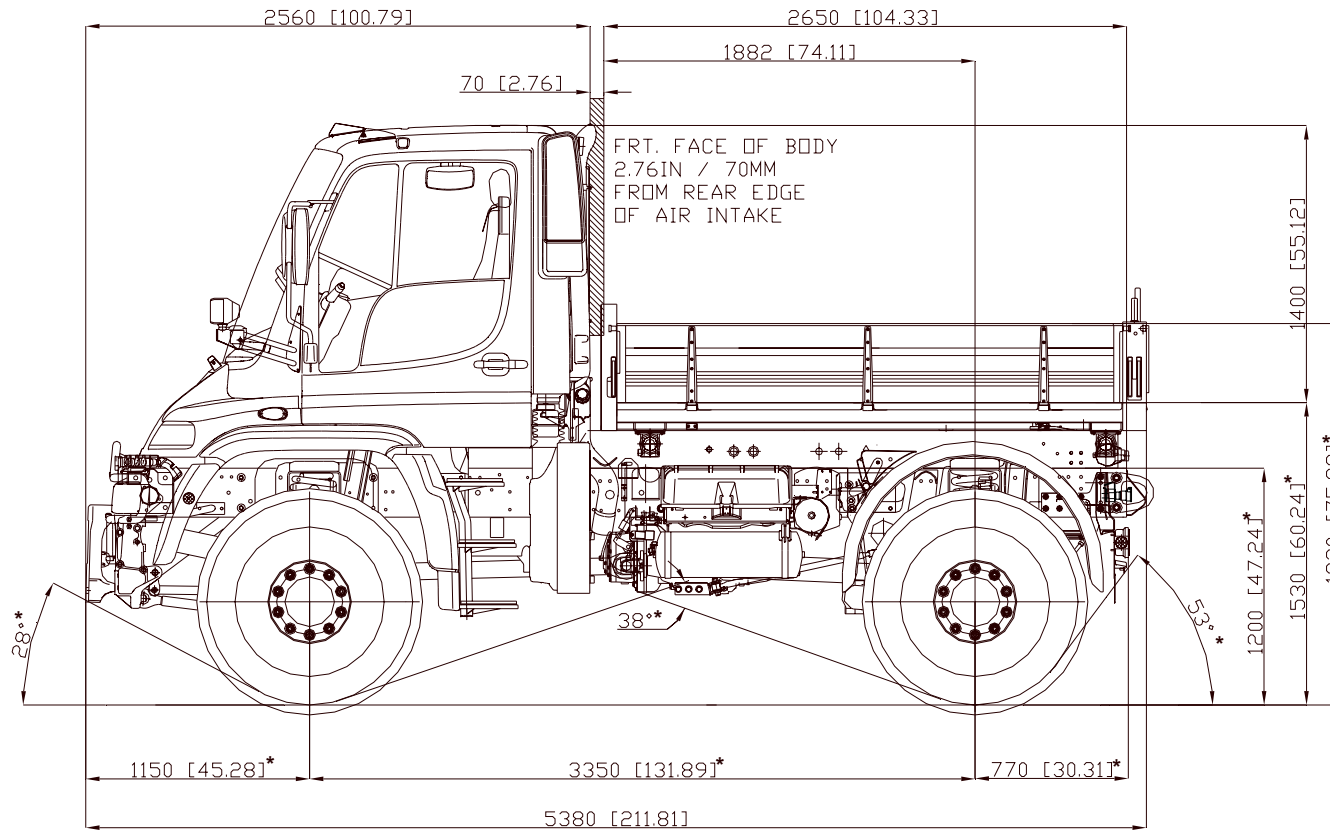
¹⁾The N05 is approved by DaimlerChrysler AG only for the drive of the power hydraulic system which is available from the factory. Written permission should be obtained from DaimlerChrysler AG for any other applications. Further information like vibration absorber and position of the N05 are available in the body and implement mounting guidelines.

14 Hydraulic System		
14.1 Basic hydraulics		
Oil tank volume	11.89 gal / 45 l	
Oil	SAE 10 W	
Oil issue quantity	2.64 gal / 10 l	
Single circuit system (Code H02)		
Flow rate at rated engine speed 2,200 rpm	12.68 gal/min / 48 l/min	
Pressure	2,900 psi / 200 bar	
Approx. output (Efficiency not considered!)	21.45 hp	
Application	Implement actuation	
Front connectors	Maximum 8 sockets, sep. return line	
Rear connectors	Maximum 4 sockets, sep. return line	
Valves	2 to 4	
Dual circuit system (Code H06, H08)		
Flow rates at rated engine speed 2,200 rpm:	Circuit 1	6.34 gal/min / 24 l/min
	Circuit 2	12.68 gal/min / 48 l/min
Pressure	2,900 psi / 200 bar	
Approx. output of circuit 1 (Efficiency not considered!)	10.7 hp	
Approx. output of circuit 2 (Efficiency not considered!)	21.45 hp	
Application	Implement actuation, constant flow	
Front connectors	Maximum 8 sockets, sep. return line, pressure line (front)	
Middle connectors	Pressure line, separate return line (circuit 2)	
Rear connectors	Maximum 4 sockets, sep. return line, pressure line (rear)	
Valves	2 to 4	

Operation of the hydraulic system:	
Operation of Circuit I:	Via joystick switch on/off; floating position via button on the joystick and separate switch per valve. Constant flow at exit 1 and 3 via separate switch.
Operation of Circuit II:	Permanent hydraulic flow via switch
Volume change-over:	It is possible with the dual circuit hydraulic system, to change over the volume flow from 12.68 gal/min to 6.34 gal/min for permanent users or positioning movements
Volume combination:	The volume of 1 st and 2 nd circuit can be added up to 19.02 gal/min / 2,900 psi available at exit circuit 2
Dual circuit hydraulic system with proportional control (code H08)	Functions as code H06, additionally proportional control of the valves in the 1 st hydr. Circuit (only pressure connection) at volume up to 12.68 gal/min / 48 l/min) engaged
Snow plow weight transfer (code H61)	At exit 3, an adjustable remaining pressure takes weight of the snow plow or mowing head and transfers it to the front axle of Unimog

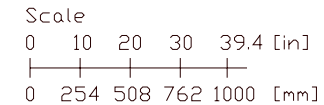
14.2 Power hydraulic system (closed or open circuit)	
Oil tank volume	13.21 gal / 50 l
Oil	SAE 10 W
Oil issue quantity	1.32 gal / 5 l
Max. flow rate circuit 3 at rated engine speed 1,800-1,900 rpm:	33.02 gal/min / 125 l/min
Working pressure circuit 3	4,351 psi / 300 bar
Approx. output of circuit 3 (Efficiency not considered!)	83.8 hp
Max. flow rate circuit 4 at rated engine speed 1,800-1,900 rpm:	23.78 gal/min / 90 l/min
Working pressure circuit 4	4,061 psi / 280 bar
Approx. output of circuit 4 (Efficiency not considered!)	56.3 hp
Connectors	Pressure & return line in front and/or middle
Power hydraulics, closed circuit III (code H63):	
<ul style="list-style-type: none"> • Axial, variable-delivery piston pump • Power output max. 83.8 hp / 62.5 kw oil cooler with 20 hp / 15 kw cooling capacity • Controlled volume flow preset delivery rate remains constant starting at approx. 1,800 rpm to 1,900 rpm engine speed • Driven via life PTO (code N05): Activation via electro pneumatic dog clutch when engine is off 	
Power hydraulics, open circuit IV (code H64):	
<ul style="list-style-type: none"> • Axial, variable-delivery piston pump • Power output max. 57 hp / 42 kw oil cooler with 20 hp / 15 kw cooling capacity • Controlled volume flow preset delivery rate remains constant starting at approx. 1,800 rpm to 1,900 rpm engine speed • Driven via life PTO (N05): Activation via electro pneumatic dog clutch when engine is off 	
Note: Combination of code H63 and code H64 is not possible!	

15 Dimensions U500



Vehicle shown with ballast and the following axle loads:
 Front axle 4000 kg / 8818.4 lbs
 Rear axle 6550 kg / 14440.1 lbs
 GVW 10550 kg / 23258.5 lbs

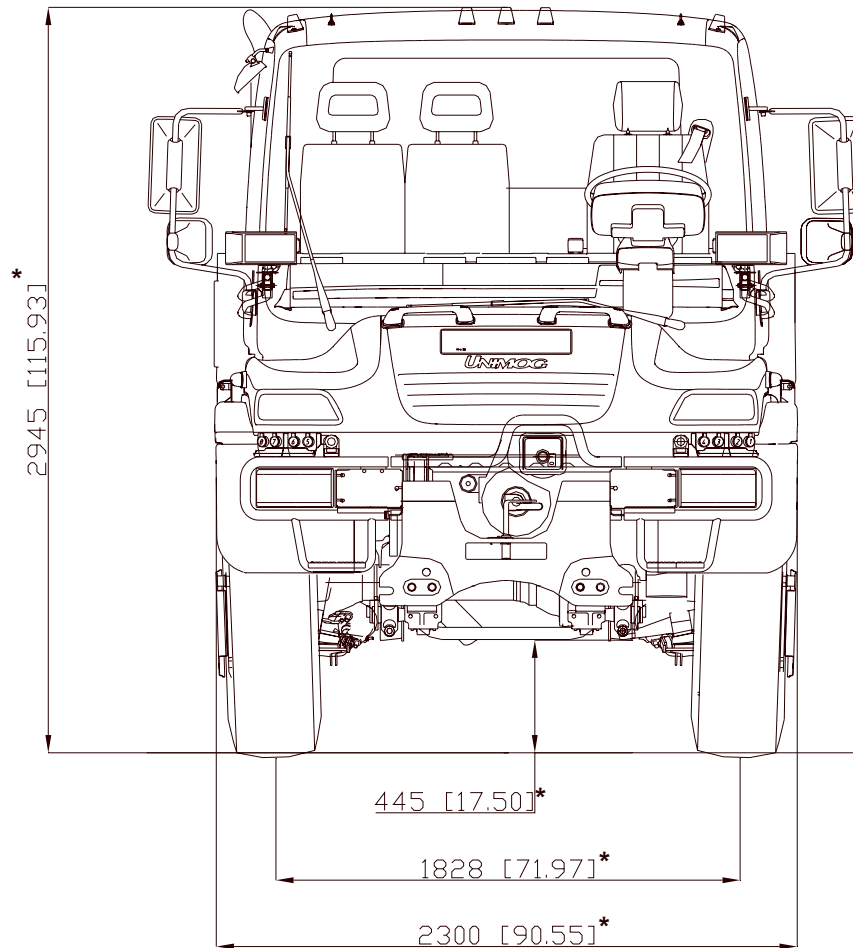
- Vehicle shown with the following optional extras:
- C 88 vertical exhaust pipe right, chrom-plated
 - D 12 implement mounting plate cat. 5
 - H 06 Hydraulic Package
 - H 64 VarioPower (power hydraulic), open circuit
 - L 47 add raised headlights for front-mounted implements
 - N 08 live PTO, and PTO front
 - P 27 platform 2670 x 2200 x 400mm
 - P 60 subframe for bodies to be supplied by sub-supplier
 - R 34 tires 395/85R20
 - S 82 wide angle rear mirror
 - S 83 ramp mirror



Note:
 Dimensions marked with a * vary by
 tires and/or vehicle (axle) loads.

Dimensions without brackets are in
 [mm]. Dimensions in brackets are in [in].

Side view of U500 NA, short wheelbase



Vehicle shown with ballast and the following axle loads:

Front axle 4000 kg / 8818.4 lbs
Rear axle 6550 kg / 14440.1 lbs
GVW 10550 kg / 23258.5 lbs

Vehicle shown with the following optional extras:

C 88 vertical exhaust pipe right, chrom-plated
D 12 implement mounting plate cat. 5
H 06 Hydraulic Package
H 64 VarioPower (power hydraulic), open circuit
L 47 add raised headlights for front-mounted implements
N 08 live PTO, and PTO front
P 27 platform 2670 x 2200 x 400mm
P 60 subframe for bodies to be supplied by sub-supplier
R 34 tires 395/85R20
S 82 wide angle rear mirror
S 83 ramp mirror

Scale

0 10 20 30 39.4 [in]

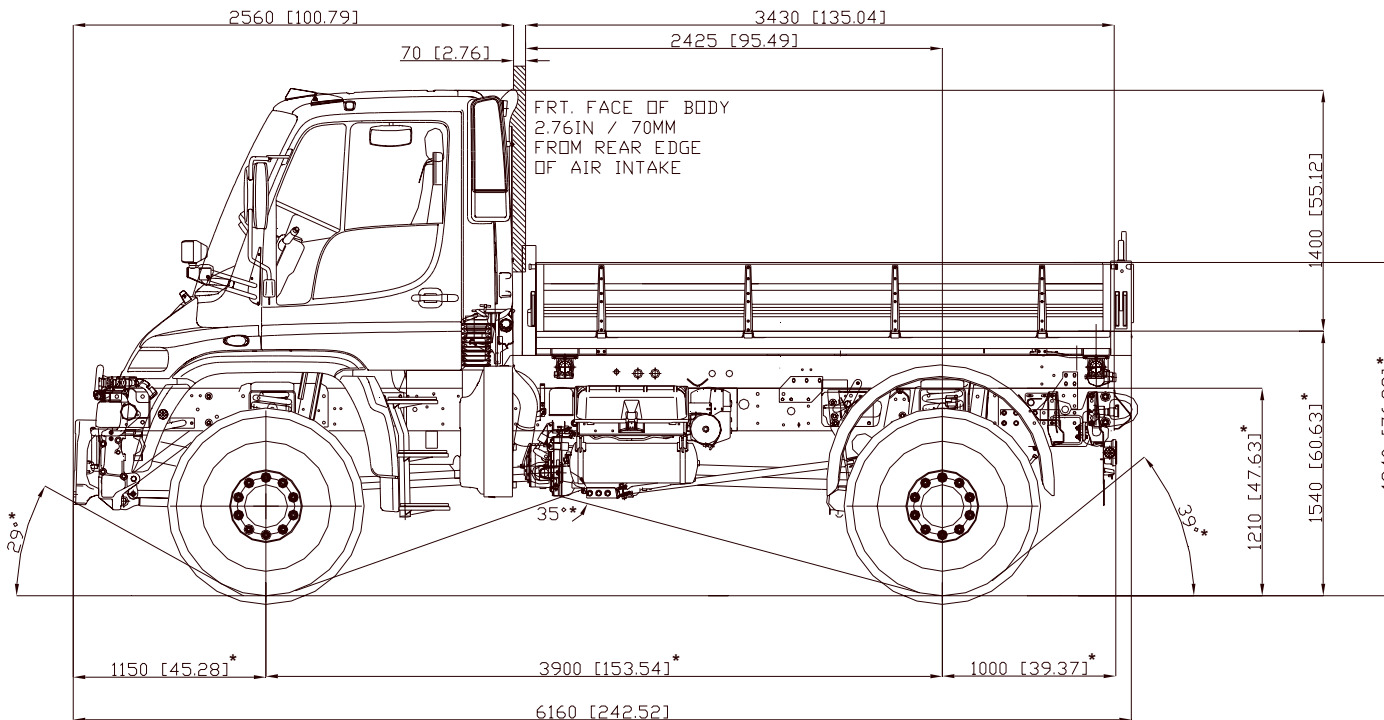
0 254 508 762 1000 [mm]

Note:

Dimensions marked with a * vary by tires and/or vehicle (axle) loads.

Dimensions without brackets are in [mm]. Dimensions in brackets are in [in].

Front view of U500 NA, short wheelbase



Vehicle shown with ballast and the following axle loads:
 Front axle 4000 kg / 8818.4 lbs
 Rear axle 6550 kg / 14440.1 lbs
 GVW 10550 kg / 23258.5 lbs

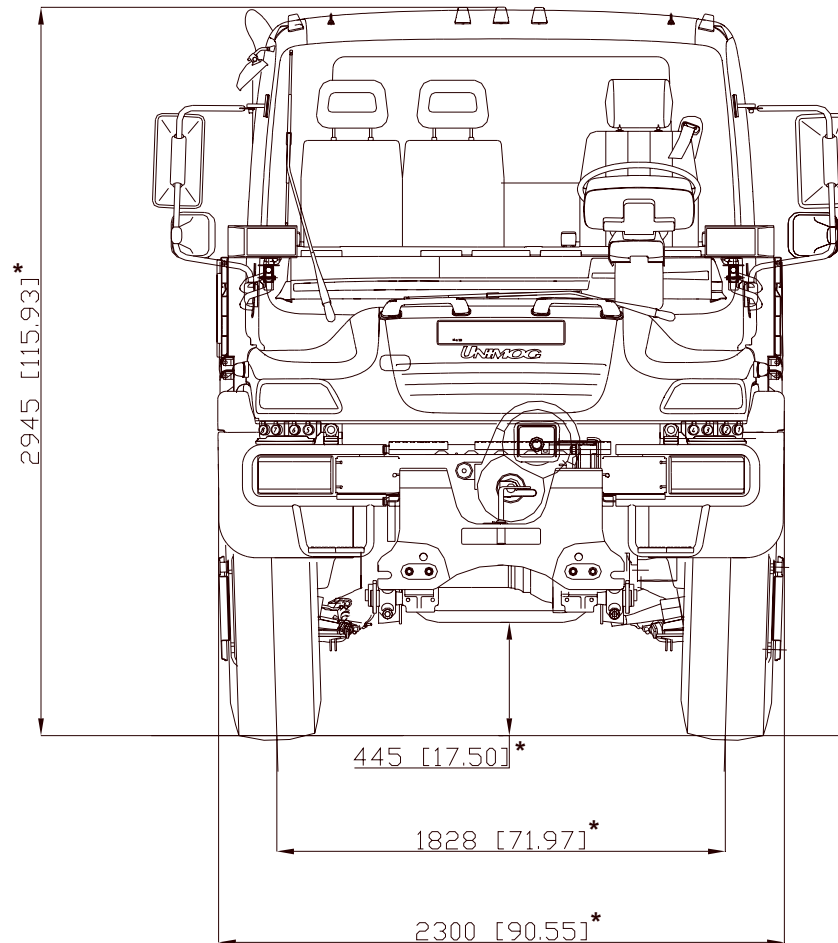
Vehicle shown with the following optional extras:
 C 88 vertical exhaust pipe right, chrom-plated
 D 12 implement mounting plate cat. 5
 H 06 Hydraulic Package
 H 64 VarioPower (power hydraulic), open circuit
 L 47 add raised headlights for front-mounted implements
 N 08 live PTO, and PTO front
 P 27 platform 2670 x 2200 x 400mm
 P 60 subframe for bodies to be supplied by sub-supplier
 R 34 tires 395/85R20
 S 82 wide angle rear mirror
 S 83 ramp mirror

Scale
 0 10 20 30 39.4 [in]
 0 254 508 762 1000 [mm]

Note:
 Dimensions marked with a * vary by
 tires and/or vehicle (axle) loads.

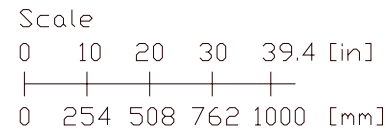
Dimensions without brackets are in
 [mm]. Dimensions in brackets are in [in].

Side view of U500 NA, long wheelbase



Vehicle shown with ballast and the following axle loads:
 Front axle 4000 kg / 8818.4 lbs
 Rear axle 6550 kg / 14440.1 lbs
 GVW 10550 kg / 23258.5 lbs

Vehicle shown with the following optional extras:
 C 88 vertical exhaust pipe right, chrom-plated
 D 12 implement mounting plate cat. 5
 H 06 Hydraulic Package
 H 64 VarioPower (power hydraulic), open circuit
 L 47 add raised headlights for front-mounted implements
 N 08 live PTO, and PTO front
 P 27 platform 2670 x 2200 x 400mm
 P 60 subframe for bodies to be supplied by sub-supplier
 R 34 tires 395/85R20
 S 82 wide angle rear mirror
 S 83 ramp mirror



Note:
 Dimensions marked with a * vary by
 tires and/or vehicle (axle) loads.

Dimensions without brackets are in
 [mm]. Dimensions in brackets are in [in].

Front view of U500 NA, long wheelbase

16 Design Gross Weights and Loads

On Highway and Fire-Fighting with Code X18:

GVW: 33,000 lbs
 FAW: 15,900 lbs
 RAW: 18,700 lbs

Off Road (all terrain):

GVW: 26,000 lbs
 FAW: 11,900 lbs
 RAW: 16,500 lbs

Tires	Rim	Base vehicle 26,000 lbs; 55 mph	Base vehicle + code X18 33,000lbs; 55 mph	Base vehicle + code V97 26,000 lbs; 70 mph	Base vehicle +code X18 + code V97 33,000 lbs; 70 mph
315/80R22.5 XDN	22,5x9	X*			
385/65R22.5 XZY	22,5x11,75	X	X		
395/85R20 XZL	10,00V-20	X	X	X	X
445/65R22.5 XZL	22,5x14	X	X***		
445/70R24 XM47	13,0x24	X**			
445/65R22.5 CONTI AC70	22,5x14	X	X***		

* base vehicle (rear axle load max. 15,870lbs)

** only with reference to max. axle loads (11,900lbs / 15,200lbs / 26,000lbs)

*** only with reference to max. axle loads (14,300lbs / 18,700lbs / 33,000lbs)

17 Trailer Couplings and End Cross Members

Code	Ultimate latch capacity	Max. Tongue Weight	Gross Trailer Weight
Q 20	20,000 lbs	6,000 lbs	45,000 lbs
Q 21	20,000 lbs	6,000 lbs	30,000 lbs

18 Off Road relevant data

Model:	405.210	405.230
Grade ability*	38.66° (80 %)	38.66° (80 %)
Maximum Tilt Angle*	35° (70 %)	35° (70 %)
Tires: 395/85R20 XZL		
Angle of approach	28°	29°
Angle of departure	53°	39°
Ground clearance	17.5'	17.5'
Fording ability	25.5'	25.5'
Tires: 445/70R24 XM47		
Angle of approach	29°	30°
Angle of departure	54°	40°
Ground clearance	18.5'	18.5'
Fording ability	26.5'	26.5'

*** Maximum grade ability and tilt angles:**

Warning:

These are absolute limit values, exceeding these limits or subjecting the vehicle to high speeds and sudden directions in steering will cause vehicle to roll over causing injury or death.

These maximum limit values can be obtained ONLY with proper ballasting, a low center of gravity, ideal road conditions and proper tire selection. Operator must be skilled in extreme off-road applications and operate with severely restricted speed.